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USSR Report

TRANSPORTATION

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USSR REPORT TRANSPORTATION

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CIVIL AVIATION

EDITORIAL ON MINISTRY'S RESPONSE TO NEWSPAPER'S CRITICISM

Moscow VOZDUSHNYY TRANSPORT in Russian 22 Feb 86 p 1

[Unattributed article: "The More Effective Utilization of the Powerful Weapon of the Party"]

[Text] A characteristic feature of social and political activity in the period leading up to the congress is exceptionally intensive and multi-faceted economic, organizational and ideological-theoretical work on decisively surmounting everything that has become obsolete and hinders our forward movement. The implementation of the party policy for accelerating the social and economic development of the country by raising the effectiveness of social production on the basis of scientific and technical progress is indissolubly linked with the corresponding rebuilding of social consciousness, the strengthening of order and discipline, and the utmost development of the creative initiative of labor.

An important role in realizing these party directives belongs to the press, which is obligated to analyze in a principled and argumentative manner events and phenomena that clearly capture the pulse of social life, strengthen the spirit of outspokenness, and formulate an elevated labor and ideological-moral tone, without which the fulfillment of any plan is impossible.

Every communist and every Soviet laborer should take part in the resolution of these difficult tasks. The employees of civil aviation, with their conscientious labor, strengthening of order and discipline, assimilation of new equipment and incorporation of new technological processes, are striving to make their contribution to the cause of accelerating the social and economic development of the country. After all, the tasks before the industry are very, very complex. And to speak of the fulfillment of the tasks placed before the industry by the party is only possible when the high quality of all aviation work is ensured. That is how the question is posed by the party. And only people can resolve this question. After all, it is precisely due to unfinished work on the so-called human factor that the majority of violations of aviation laws occur.

Every commander and political worker should direct his efforts toward the selection, education and arrangement of personnel that are connected with ensuring the main thing--flight safety. Political workers and people directly connected with the selection and education of personnel have a special role in

this. An important contribution to the resolution of these tasks is allotted to the press, which through the power of the printed word is summoned to assist the realization of the party directives in these questions, summarize progressive experience, search out the best, most worthy reflection, and, where necessary, to act with its sharp weapon--criticism. And these tasks in all their acuity are posed by the Central Committee of our party.

The April (1985) Plenum of the CPSU Central Committee, among the most important tasks directed at accelerating the scientific and technical development of our society, has keenly posed the question of ideological and political education in all its forms, emphasizing the especial role of the mass media and propaganda. The mass media, noted the Plenum, is called upon to analyze deeply events and phenomena, raise serious problems and propose ways to solve them, and affirm their substantiveness, operativeness and informational saturation. The wise word of the party, directed toward the individual, awakens the thought and develops the initiative of people and cultivates an intolerance for shortcomings. The effectiveness of the press, television and radio will increase considerably when the party committees and managers at all levels render them active assistance and support. It is only necessary that this assistance and support be always timely and substantive. And of course, any attempts to suppress or ignore criticism should be subject to party evaluation in principle.

A business-like and creative collaboration between the labor collective and the organ of the press and between the newspaper and the industry always assists the improvement of our common affairs. That is as it should be. But, unfortunately, that does not always happen. Defending the honor of the uniform, some managers apply efforts toward concealing shortcomings and hiding them, and upon the appearance in the newspaper of a critical feature they conceal or "refute" it. This situation diminishes the significance of critical (and not only critical, but instructive) features in the press and deprives the press organ of the opportunity to inform the readers of measures taken and the positions of this or that manager, including even managers at the ministerial level as well as employees of the trade-union central committee of aviation employees, on questions raised.

A portion of the management employees of the territorial administrations and trade-union committees, including employees of the MGA [Ministry of Civil Aviation] apparatus as well, have not comprehended the requirements of the times and react in an impermissibly untimely manner to criticism, do not listen to the opinions of labor collectives expressed in the pages of the press, and do not manifest the requisite exactingness toward themselves and their subordinates.

The resultant unhealthy relationship between the industry press, the ministry management and the trade-union central committee was evaluated in principle by the CPSU Central Committee in the decree of 28 Jan 86 "Instances of Gross Administrativeness and Suppression of Criticism with Regard to the Editorial Staffs of the Newspapers VOZDUSHNYY TRANSPORT and VODNYY TRANSPORT." Along with the shortcomings revealed, it was noted that it is necessary for commanders at all levels and managers of social organizations to react clearly to newspaper features and to support actively all worthwhile initiatives to

which the newspaper, as the social rostrum, devotes newspaper space, and to introduce into practice widespread progressive experience and to take into account in practical work questions raised in the pages of the Soviet party press.

This decree of the party Central Committee was a most important theme for the joint session of the collegia of the MGA and the trade-union central committee of aviation employees. The tasks of the command and management complement and party and social organizations of civil aviation were reviewed for the fulfillment of the directives of the April (1985) Plenum of the CPSU Central Committee on the development of criticism and measures for raising the effectiveness of critical features in light of the requirements of the CPSU Central Committee decree of 28 Jan 86, in which was presented the party evaluation in principle of the work of managers, the ministry apparatus, and territorial and industry administrations with critical features in the press. It was emphasized at the collegium that raising the power and effectiveness of press features is one of the most important and principled Leninist precepts. Invariably demanding that the guilty be uncovered and punished and the shortcomings that were revealed be eliminated in operation, Vladimir Ilich Lenin himself indicated what practical measures should be applied to set matters straight. That is how the party poses the question, and that is how we should work.

The party policy of accelerating the country's social and economic development obligates the command and management complement and the party and trade-union committees to rebuild management forms and methods in productive and party political work in a timely manner. The realization of party instructions on creating an atmosphere that excludes subjectivism and placidity in every labor collective occupies an important place in this rebuilding. The press can also play an invaluable role here. Any attempts at diminishing the role of criticism and self-criticism and cases of bureaucratism, abuse of official position, flattery and toadying, discussed at the joint collegium, must be eliminated through the efforts of commanders and political workers and party and trade-union organizations.

Our society of developed socialism is undergoing a stage of serious rebuilding and improvement in many areas of social relations and management methods and in the modes, forms and style of party and state work. And this presupposes the broad development of criticism and the ability to use it as a means and method of eliminating shortcomings, resolving productive tasks and mobilizing people for the solution of fundamental problems in social and economic development.

The political leadership of the fulfillment of these most important tasks of this modern stage in everyday affairs is entrusted to the Political Administration of Civil Aviation, created by a decree of the Central Committee of our party.

Every employee of civil aviation knows the key and critical points of his industry. Many of them are correctly perceived by the majority of managers in evaluation. We will take, by way of example, such a critical point as the

conditions of passenger service. There are still more shortcomings than achievements in this matter. This evaluation of operations makes it possible to find approaches to improving its quality at all levels, beginning with scheduling.

Or another example: how, let's say, they reacted to a newspaper feature at the Nizhnekamsk Airfield. On 31 Oct 85, VOZDUSHNIY TRANSPORT published the article "The New Disputes the Old," in which ATB [Air Technical Base] Chief Kuznetsov, Shipping Service Chief Stepanov and Commander Mankeyev were subjected to serious criticism. The management of the enterprise, along with the deputy commander for political and educational work, made it impossible for people not only to read, but even to see this newspaper for a week, and the reply sent to the editorial staff by Association Commander Comrade Sadykov was the most formalistic of replies which Partkom Secretary Bakanov refused to sign. The guilty were not punished, and Stepanov was even promoted to chief of the service and organization of postal and freight shipping at the Kazan Airport. Is it possible that they did not read this article and draw conclusions for themselves at the Aviation Operations and Shipping Main Administration and the ministry Personnel Administration on why liberalism was demonstrated toward the inactivity of the Volga Administration and their own apparatus?

Managers responsible for the state of political and educational work, capital construction, the quality of the training process and discipline in educational institutions reacted in a formalistic manner or not at all to criticism. The trade-union committees practically dodged collaboration with the editorial staff.

The materials of the April (1985) Plenum of the CPSU Central Committee and other party documents require every communist, whatever post he occupies, to review critically obsolete conceptions and find his place in the ranks of the creators, actively uncovering shortcomings and battling with all straightforwardness for their eradication. The press has an important role in this process, and he who understands its role can achieve much, utilizing both favorable materials that summarize progressive experience and propagate leading labor methods, and critical features that are directed at improving our common cause. Close contact with the newspaper is maintained, for example, by the MGA Chief Inspectorate. Every month the "Post of Social Flight Safety Inspector" appears, which is conducted in the newspaper by the ministry's Chief Inspectorate. Not one item under this rubric remains outside the field of view of the inspectorate apparatus, and no material goes without reply. This is an example for the managers of the GlavNTU [Scientific and Technical Main Administration], UNS [Director of Supply Administration], GlavPEU [Economic Planning Main Administration], TsUERTOC [Operations and Repair of Radio Technical Equipment and Communications Central Administration] and several other ministry administrations.

The press organs must achieve effectiveness with its materials and track the results of critical features without wasting words. Persistence of journalistic inquiry, full objectivity and consideration, party principles and

precision--these are the primary requirements presented to the organs of the Soviet party press.

A newspaper, according to the pithy Leninist definition, is not only a collective propagandist and collective agitator, but a collective organizer as well. And every newspaper feature on a problem, be it a summary of progressive experience or a criticism of existing shortcomings, carries within itself an organizational beginning. Yes, organizational! Because the work on incorporating all that is progressive, on eradicating all that is outdated, presupposes the efforts of the editorial collective and the organizational efforts of its management. And all of this is so as to develop, in all its breadth, the creative force of socialist self-government, to awaken the activeness of the masses, to bring together the forces of party journalists, newspaper authors and every industry laborer for a new step forward. That is what the party teaches us. That is what life demands.

Such specific, party, principled and self-critical conversation took place on the eve of the 27th CPSU Congress at the expanded collegium of the Ministry of Civil Aviation and the trade-union central committee for aviation employees. A resolution was adopted that obligates the communists of the industry and all aviation workers to observe party standards in all work and to follow Leninist principles in everything.

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CIVIL AVIATION

OFFICIALS ON AEROFLOT'S 1985 PERFORMANCE, 1986 PLANS

Moscow VOZDUSHNYY TRANSPORT in Russian 28 Dec 85 p 2

[Report on press conference given by B. P. Bugayev, Minister of Civil Aviation, and B. Ye. Panyukov, First Deputy Minister of Civil Aviation, on 27 December 1985 at the Ministry of Civil Aviation, Moscow: "Aeroflot's Course: Acceleration"]

[Text] On 27 December, a press conference was held in Moscow to discuss the operating results of civil aviation in the 11th Five-Year Plan and the prospects for its future development.

The command-management staff of the MGA [Ministry of Civil Aviation]; managers of a number of operating administrations, enterprises, plants, institutions and educational institutions and representatives of sector party and trade-union organizations took part.

The press conference was opened by B. P. Bugayev, Minister of Civil Aviation.

B. Ye. Panyukov, First Deputy Minister of Civil Aviation, spoke to journalists from the central press, radio and television.

Civil aviation has been assigned an important role in strengthening the economy of our country and raising the standard of living of the Soviet people. Presently, there is an all-around effort in the sector to search for new reserves and possibilities of improving the efficiency and quality of air-transport operation. All of this activity is inspired by preparations for the party congress. The performance totals for the 11th Five-Year Plan, which are characterized by qualitative changes, show the sector's dynamic and stable growth. Civil aviation has achieved a higher passenger-traffic growth level than other types of transport. To date, over 550 million people have been transported. Shipments of freight and mail totaled 15.5 million tons for this period, including 160,000 tons of fruits and vegetables. Seventy-six new air routes were opened. Il-86 airplanes have been put into service on busy passenger routes. Aeroflot's flagship is now flying to 9 cities in our country and 14 foreign cities.

During the 11th Five-Year Plan, new Il-86, Il-62M, Tu-154 and Il-76T airplanes were added to the fleet. More modern airplanes are now being used on 310 routes.

During this five-year plan, specific aviation-fuel consumption was reduced by 10.5 percent. Having fulfilled ahead of schedule its plan tasks for 1985, the Aeroflot collective fulfilled its voluntary higher socialist obligations: to operate two days on conserved fuel.

During the current five-year plan, the capacity of air terminals increased. For the 12 largest airports, including Sochi, Sukhumi, Yerevan, Krasnodar, Semipalatinsk and others, this indicator rose by 6100 passengers per hour. Hotels were built and opened in Yakutsk, Salekhard, Batumi, Donetsk and other airports.

Our aviators have made an important contribution to the development of the country's productive capacity. The main volume of air-service operations was performed in Western and Eastern Siberia, Krasnoyarsk Kray, Yakutsk ASSR and the Far East, which accounted for 54 percent of the total accrued flying time of PANKh [as published] hours. Agricultural pilots reached their five-year-plan goal by 1 July 1985. They dusted 520 million hectares of agricultural lands.

There are many operating enterprises in civil aviation which are operating steadily, without slowdowns caused by bad weather or objective difficulties. These include, in particular, TsUMVS [Central Administration of International Air Service] and the Urals, Azerbaijan, Komi and other administrations, which have fulfilled their five-year-plan tasks ahead of schedule. They have skillfully used production-intensification reserves and their aviation equipment; they have also conserved resources while successfully solving social problems.

There are some unsolved problems. Recently, the collegium of the Ministry of Civil Aviation discussed the fulfillment of measures for improving passenger service and concluded that the performance level in this area still does not meet modern standards. Here, press reports and passenger letters have contained many suggestions, revealing deficiencies in the organization of information-reference work, the observance of transportation rules, ticket-selling, in-flight service and the regularity of flights.

We are critically evaluating the results of our work and comparing them with the requirements and tasks which have been placed before us by our country's people at the April and October 1985 Plenums of the CPSU Central Committee. As was noted in the draft of the new Party Program, an essential problem in the party's economic strategy at present is the basic acceleration of scientific-technical progress. This statute also fully determines the paths of economic development of civil aviation, which is a component of the country's unified transport system.

The draft Basic Directions states that air transport will begin to operate new, high-efficiency, mainline passenger airplanes and medium-sized freight airplanes. Civil aviation will also be equipped with aircraft for use in

the Arctic and Antarctic, on local air routes and for agricultural and special uses. The unified air-traffic control system will continue to be improved, by accelerating the implementation of the necessary automated systems. Passenger turnover will increase by 17-19 percent and the specific fuel consumption will be reduced by 3-5 percent.

What are the most important key items in the socio-economic development of civil aviation during the 12th Five-Year Plan? The draft five-year plan stipulates that passenger turnover, the basic indicator of sector growth, must be more than a trillion passenger-km. Over 580 million passengers are to be carried, as well as 15.8 million tons of freight and mail.

The cost of one adjusted ton-km is to be reduced by 3 percent by:
1) implementing the achievements of science and engineering, 2) improving the structure and placement of the aircraft fleet and 3) expanding the flight areas of the most productive and economical aircraft: the Il-86, Tu-154M and Yak-42.

The draft plan for civil-aviation operations calls for labor productivity in 1990 to be 11.5 percent higher than in 1985, the plan for which is expected to be fulfilled. For the five-year plan overall, 80 percent of the increase in work volume is to be provided by labor-productivity increases, while the wage expenditures per unit of production will decrease by 5 percent from the 1985 level.

New, high-efficiency, mainline passenger and freight airplanes, including the Il-96-300, Il-114, An-72, An-28 and others, are to be put into service. Il-114 and L-610 passenger airplanes are being developed for local air routes. The fuel efficiency and other technico-economic indicators of both these airplanes are higher than the An-24 and Yak-40 airplanes now in service. The helicopter fleet will also be significantly renewed.

Automated air-traffic control systems with a higher level of automation are to be developed and implemented during the next five-year plan. Future piloting-navigation systems, the development of which is specified by the Basic Directions, are to be installed on future airplanes. These systems will automate flight from takeoff to landing, including under difficult weather conditions.

Much attention in the sector will be given to automating the processes of production and management.

Sector scientists are being given an important role in the acceleration of scientific-technical progress in Aeroflot. Today, our institutions of higher education have great scientific potential. Of the 125 doctors of sciences in the sector, 110 are working in our institutions of higher education, where 1100 candidates of sciences are also working. The scientists are performing much scientific work on current problems of civil-aviation development.

Great tasks also face our collective in the area of capital construction. During the 12th Five-Year Plan, second runways will be built at the Tolmachevo, Volgograd and Tbilisi airports in order to improve flight

quality and improve the network of airports accepting Il-86 and Il-62 airplanes. The Penza, Irkutsk and Leningrad airports will be repaved.

Air-terminal complexes are to be built at the Sochi, Domodedovo, Simferopol and Tbilisi airports. Much attention will be given to building terminal complexes at airports in the Far East and Siberia: Khabarovsk, Tyumen (Roshchino), Petropavlovsk-Kamchatskiy and Blagoveshchensk.

A significant portion of the funds allocated by the government in the coming five-year plan will be directed toward improving the labor, living and recreation conditions of aviation workers. This is an important step in fulfilling the party's social policy.

The ministry is implementing a series of measures to further develop cooperation with foreign countries in the area of civil aviation and to improve the economic efficiency of Aeroflot's international services. Special attention in this area was given to an all-around strengthening of multilateral and bilateral aviation cooperation with CMEA member countries.

Despite the sharp exacerbation in the world political situation, we have been able to strengthen the treaty-legal basis of aviation cooperation with other countries and to expand the area of Aeroflot's international flights. For instance, as of 1 January 1981, the USSR had air-service agreements with 92 countries; Aeroflot had regular flights to 105 points in 92 countries. At present, there are air-service agreements with 100 countries; Aeroflot makes regular flights to 122 points in 97 countries.

In order to improve the economic efficiency of international flights, Aeroflot during this five-year plan took measures to develop basically new conditions of cooperation with leading West-European airlines and the Japanese airline JAL to operate the Transsiberian Route. Other significant factors are: 1) introducing Il-86 airplanes into service on Aeroflot's busiest international routes, 2) straightening flight routes and 3) expanding foreign commercial rights accorded to Aeroflot.

During the current five-year plan, Aeroflot received permission to use a number of air routes which improve flight safety. At the same time, several existing routes were straightened, primarily in Asia and Africa.

The recent Soviet-American summit meeting in Geneva laid the foundation for normalization of relations between the two countries in the area of air service. A basic agreement was reached on the renewal of regular Aeroflot flights to New York and Washington and of Pan American World Airways flights to Moscow and Leningrad in April 1986; this service will consist of up to four flights weekly. This agreement will undoubtedly serve the interests of improving bilateral Soviet-American relations.

In the next five-year plan, measures will be taken to develop important directions of international air shipments, to further improve the economic and hard-currency efficiency of air shipments and to improve the efficiency and quality of passenger service.

Future tasks include: 1) developing and carrying out a unified economic policy of CMEA member countries on world air transport for the period until 1990 and 2) forecasting the technico-economic development of CMEA-countries' air transport over the longer term.

Work will be continued on reaching air-service agreements with Bolivia, Brazil, Venezuela, Columbia, Panama, Trinidad and Tobago, Uruguay, Equador, Zimbabwe, Nepal, the Philippines and Australia.

Much attention will be given to the all-around development of scientific-technical links with foreign civil-aviation departments and companies.

All of this is tangible proof that civil aviation's economic structure is reaching qualitatively new levels of development.

In conclusion, the press-conference participants answered questions from the correspondents.

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CIVIL AVIATION

AN-2 MODIFICATION, UPGRADING PROGRAM

Moscow VOZDUSHNYY TRANSPORT in Russian 19 Sep 85 p 2

[Article by L. Golovashkin, department chief of the Aviaremont Industrial Association, under "'VT' Patent" rubric: "Upgrading an Old Airplane"]

[Text] An-2 airplanes have been in operation for nearly 40 years. They assist geologists, polar explorers and grain farmers. They provide reliable transport in regions that "only airplanes can reach." Despite its advanced age, this winged worker will be needed to solve a number of tasks for many years to come.

Recently, new materials, new equipment and new technological processes have appeared which can be used to "rejuvenate" these old airplanes at civil-aviation repair plants. L. Golovashkin, department chief of the Aviaremont Industrial Association, discusses specific matters in this important work.

An integrated program for improving the reliability of An-2 airplanes and improving their repair and operation has been developed at the Aviaremont All-Union State Industrial Association. This program takes into account developments made by specialists of the Special Design Bureau imeni O. K. Antonov, staff members of the State Scientific-Research Institute of Civil Aviation and process engineers and designers of airplane-repair plants.

What does this program specify?

Let us take, for example, a very labor-intensive process such as replacing the fabric skin of the wings and tail assembly. Presently, canvas and nitrocellulose lacquer are consumed every time repairs are made and numerous worker brigades must be called in... Meanwhile, several subdivisions already have several airplanes with synthetic skin. An experimental heat-shrink fabric was used; when heated, the fabric firmly wraps around the wing frame. This eliminates the use of nitrocellulose lacquers, which in turn means greatly improved working conditions.

The test results have been positive and repair workers want to widely implement this new technique. However, the new technology is impossible without special PAP's [aerodynamic heating furnaces]. But, work on these

furnaces at civil-aviation plants Nos 409 and 20 is somewhat behind schedule because a number of components are lacking.

The PAP is truly a wonder-furnace. It is completely fire-safe. Therefore, after several improvements are made, this furnace will be suitable for the active drying of painted airplane surfaces. In combination with enclosed automated painting chambers, this will improve the quality of airframe coatings, reduce manual labor, eliminate dangerous conditions in the workplace and reduce repair time.

But there is still one other difficult problem: airframe corrosion, especially for agricultural airplanes. Liquid and, especially, solid pesticides and fertilizers become lodged in gaps and cause intense metal corrosion in the presence of moisture. This necessitates extensive and labor-intensive riveting work or sometimes replacement of the entire fuselage. New measures have been developed in the program, however. The fuselage bottoms will now be made of fiberglass instead of duraluminum panels, which can deteriorate.

The airplane's power plant has not been overlooked either. The time between overhaul of exhaust-manifold and motor-frame shock-absorber parts has been doubled. For this, of course, some modifications and renewal work must be performed. But reuse of shock absorbers alone will provide an annual economic savings of up to 320,000 R. Meanwhile, removing the heat pipes from the cockpit heating system for flights in summer, reducing the dimensions of the carburetor heating gate and increasing the air-intake area will improve the engine's reliability, reduce power losses and save aviation fuel.

Besides the changes in repair technology, the program provides for airplanes to be equipped with a new device to make the pilot's job easier. This is a device to measure the weight of pesticides in the tank; the device was developed at civil-aviation plant No 31. An integrated system of instrument monitoring and control of agricultural-equipment operation during flight will improve the quality of crop-dusting work and the cockpit labor conditions.

Full realization of the integrated program will free up 130 workers (riveters and painters) and will conserve annually spare parts and materials worth 2,100,000 R and 18,000 tons of high-quality benzene, in addition to the above-mentioned scarce natural fabric and lacquer.

The most important task for each worker of the collective and for each communist in production is to actively participate in the implementation of new technical developments which have resulted from expanded scientific-technical progress.

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CSO: 1829/42

CIVIL AVIATION

MINSK-2 AIRPORT RECEIVES ICAO CATEGORY 1 RATING

Moscow VOZDUSHNYY TRANSPORT in Russian 31 Oct 85 p 3

[Article by N. Inin, VOZDUSHNYY TRANSPORT correspondent: "Airport Becomes Weatherized"]

[Text] Minsk--The new airport in the Byelorussian capital, Minsk-2, has acquired yet another valuable quality ahead of schedule. The other day, by resolution of the USSR Gosaviaregistr, it was awarded a certificate of fitness for aircraft flights according to category 1 of the ICAO--International Civil Aviation Organization.

Now passenger plane crews can complete flights when meteorological conditions make visibility poor, when the lower edge of the clouds reaches 60 meters and the range of visibility is 800 meters.

A large volume of complex engineering and technical operations in the operational development of a radio-beacon system and light-technology and meteorological equipment was carried out by builders and assemblers with the active participation of the new airport's aviation workers.

"The Minsk-2 Airport," says K. Ratkevich, assistant chief of the Byelorussian Civil Aviation Administration, "will allow our aviators to increase the regularity of flights significantly and to hold to a minimum delays not only in departures, but also in landings in difficult meteorological conditions. The reasons for malfunction situations will disappear and the level of passenger service will improve. The construction of a terminal complex, which is slated to become operational in 1988, is continuing now at the Minsk-2 Airport. Capital expenditures for airport projects already total about 65 million rubles."

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CIVIL AVIATION

VOLGOGFAD 'START' AUTOMATED ATC SYSTEM DELAYED

Moscow VOZDUSHNYY TRANSPORT in Russian 21 Nov 85 p 1

[Article by V. Tamarin, VOZDUSHNYY TRANSPORT correspondent: "The Extended Start of 'Start'"]

[Text] Volgograd--This three-story building appeared as a white stone island among old structures. We enter it and, along the creaking floorboards of the corridors, go up to the third floor. Departmental operations are going on on the first two. There are so many painters, plasterers and carpenters that one understands immediately--the facilities are about to be turned over. That means they are rushing the plan.

In conversations the guess is upheld; the builders are hurrying to present the fitters with the facilities for the automated air traffic control system "Start".

"We should have hurried before," laments N. Koliverdov, Minradiotekhprom spokesman. "We have lost so much time."

Nikolay Nikolayevich is right; turnover of "Start" was planned for 1983. For various reasons both the construction and the assembly of equipment stretched out for years but now, when the facilities are practically ready, other problems are cropping up. In the third-floor facilities we are examining there are boxes, packed and unpacked. Three fitters from Baku are sorting out the apparatus.

I was curious; were there not very few of them?

"Without a doubt," confirmed N. Koliverdov. "We need a minimum of 15 people to complete the assembly in three months. But does it make sense to bring to a site people who do not adhere to any controlled time period in its construction which, in principle, is not even a planned one for us, since no one can give guarantees that a volume of work will be provided for us. We are getting the impression that the "Start" aviation enterprise is not very necessary. Otherwise they would have tried their best to help us in this stage."

He gestures toward the boxes of equipment. "See over there, 300 meters away, is a dock. In eight days only 15 boxes of equipment were delivered to us from there. And there are two hundred in all. Tell me, when will they all make it to this floor? Can it be that in an aviation enterprise people cannot be found to speed the delivery of equipment?"

N. Koliverdov invites into the room where the control panels will be installed. Some of them are assembled, but a cable needs to be laid.

And for this operation the presence of specialists from the ERTOS [expansion unknown] base is required. They will have to operate the system, to know which cable is laid where. But, alas, so far not a single person has been sent to this site from ERTOS.

We examined the control panels. To the uninitiated, the whole complex of instruments seems oversimplified.

"That's the way it is," S. Popov, the airport's assistant chief for traffic, agrees with the observation, "but only at first glance. The entire apparatus, third generation with micromodule circuits, requires a higher level of engineering. When it goes on line, dispatchers will have time free from lengthy radio communications, there will be more time for figuring out the situation in the air and analyzing it will be simpler. Because the machine will produce all the basic data on the location of an aircraft, its altitude, course, current speed, flight number and side number."

Sergey Ivanovich spoke about this excitedly and interestedly, and it was even somehow uncomfortable to ask him why the commissioning of "Start" is dragging on so. But I nevertheless tried to clarify his point of view.

"Neglect has been tolerated on all levels," he answered. "But we are actively preparing for working with the system; we are taking a theoretical course now, and later we will train."

We glanced in every corner of the floor. And observed on many of the unpacked tables and panels--dust. Which is absolutely intolerable. However strange it is, there is no clean-up. A petty detail? No, a necessary part of the technological process of assembly. And it also often depends on the attitude on the part of the management of the aviation enterprise toward its work. If it has actually become its own.

To sum up, I did not particularly want to do this reporting. For, according to our data, it would have been possible already to write about the system becoming operational. And, in fact, we saw that there is no end to the work. And the assembly time may extend intolerably. And it turns out that the cable production for this categorized site is set by GUZSANT [expansion unknown] for 1986. A whole number of instruments are in the delivery plan for the fourth quarter of 1985, and there is so far no sign of its arrival. In a word, it is with a depressed feeling that you leave the site with the ambitious name "Start". Does the Irkutsk "Start", where there are also unpacked boxes of expensive equipment, in both places worth hundreds of thousands of rubles, have the same fate in store? Or the Novosibirsk one where, after sitting idle four years, the obsolete equipment was disassembled; new equipment was brought in and its assembly was full of problems.

One would not wish such a fate on the Volgograd facility. The more so since it is badly needed by this airport.

CIVIL AVIATION

YEREVAN 'START' AUTOMATED ATC SYSTEM OPERATIONAL

Moscow VOZDUSHNYY TRANSPORT in Russian 26 Nov 85 p 1

[Article by V. Gurdzhiyants, contributing correspondent: "New Possibilities of 'Start'"]

[Excerpt] Yerevan--"Start", a new domestic automated air traffic control system, has become operational at the Zvartnots Airport in Yerevan.

The combined plan-indicator shines with a clear green light--the dispatcher's chief means of obtaining information about a flight. All the air space in a radius of many tens of kilometers around the airport is visible on it. The system gives exhaustive information on any plane in the zone of activity of the newly built radiolocation complex.

Automated collection and processing of data on the elements of a flight, which is done by a computer center, allows the dispatcher to see on screen indicators of the aircraft flight and number, to determine its coordinates, speed and altitude of the flight, and fuel reserves. The results obtained make it possible to correct the course of the plane as it approaches the airfield. Three dispatchers, each of whom has his own observation zone, guarantee the safety of the concluding phase of the flight.

"Zvartnots is the eighth airport in the country where the 'Start' system has been tried," says S. Chuguryan, chief of the dispatching center.

In recent years, with increasing intensity of flights and density of air traffic the old dispatching center ceased to meet the needs of the day. Under these conditions, commissioning a new automated system became a pressing need. Thanks to it, the operational resources of the traffic service dispatchers and the capacity of the airport's air space have increased significantly.

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CIVIL AVIATION

'TRASSA' AUTOMATED ATC SYSTEM OPERATING IN SIMFEROPOL

Moscow VOZDUSHNYY TRANSPORT in Russian 1 Jan 86 p 3

[Article by T. Boyarskiy, contributing correspondent: "'Trassa' Screen Lights Up"]

[Text] The "Trassa" automated air traffic control system has been put into operation at the Simferopol Airport. Four remote radar positions are the eyes and ears of the system, connected with the traffic control point by communications channels. Through these communications channels takes place the collection of information that is processed and analyzed by equipment with electronic memory, and then relayed and represented in the form of symbols, vectors and numerical indications on the air situation displays of the dispatchers' panels.

"Trassa" allows cartographic information to be formulated directly on a screen and permanent air traffic patterns, as well as unique ones provided by the dispatcher, to be set up on the basis of it. With a single flip of a switch one can call up on the screen the air situation that will arise in only one, three or six minutes. Without leaving his comfortable chair, the dispatcher finds out all he could want to know about the planes in his sector.

In setting up the system, a great deal of attention was devoted to the problem of reliability. A dispatcher cannot be left blind and deaf even for three seconds. In order that he not be left deaf, the power supply for the radar equipment has fourfold duplication. So that he not be left blind, even interlocking of the computer facilities was foreseen. If the electronic equipment, even for a second, malfunctions, information from the radar will continue to appear on the screen by means of electronic machines. That is, the radar picture, though not free of incidental strobing, will not disappear from the dispatcher's screen.

According to the plan of its creators, the system can be improved. It can be converted to more modern computer technology, and the list of tasks that can and must be solved will be expanded. First, the territory controlled by "Trassa" can be increased up to 400-500,000 square kilometers. Secondly, the problems of analyzing and processing meteorological information and preventing potential conflicts will be solved.

Creative searching and supply problems are in the past. The routing of construction, assembly and adjustment is in the past.

The ribbon has been cut to celebrate the opening of the dispatching room. Today people in white shirts took their places behind the dispatchers' control panels.

YAKUTSK AIRPORT IMPROVEMENTS CONTINUE

Moscow VOZDUSHNYY TRANSPORT in Russian 24 Oct 85 p 1

[Article by F. Sergeyev, assistant chief of the Yakutsk Civil Aviation Administration: "Workable Prospects"]

[Text] In the summer of 1983, when the first routine Il-62 landed at the airport in Yakutsk and established the beginning of regular flights connecting Moscow with the capital of our autonomous republic, we all well understood that it was only the first stage in a huge project.

Under permafrost conditions a unique runway was built that is capable of handling the heaviest planes, airfield installation equipment has been installed allowing takeoffs and landings, and a number of other facilities have been built, without which it would be impossible to handle the Il-62.

But, while signing the act turning over the first phase of the Yakutsk airfield complex, we were preparing ahead of time not to slow down the rate of completion of all necessary operations. And in the past three years much has been done. We have completed construction of a new taxiway, reinforcement and expansion of RD-1 [taxiway-1] and hardstands for the Il-62; the assembly of light-signaling equipment is concluding. Besides this, an extended waiting area will be put into operation this year where there will be sleeping areas, a restaurant and various auxiliary accommodations that will raise the level of passenger service significantly.

Our primary contracting organizations--SMU-16 [Construction-assembly directorate] PSMO [expansion unknown] Aviastroy and SU-888 [Construction directorate] of the Mirnyydorstroy Trust--should complete operations on the second phase of the complex. This means that at the end of 1985 the Yakutsk Airport may be accepted for operation according to the fitness standards of ICAO [International Civil Aviation Organization] category 1.

What will this give aviation enterprises and passengers? In the wintertime the airport closed frequently due to freezing fog. The new equipment will allow planes to take off and land under more difficult weather conditions than before. And this promises economic benefits for the enterprise and better passenger service--nowadays many criticisms from their quarter arise precisely because of weather-related delays.

A large strenuous job lies ahead in the concluding stage of the construction of the airfield complex in Yakutsk. But we are absolutely sure that it will be fully completed in the time allotted. This will be our gift of labor to the 27th CPSU Congress.

CIVIL AVIATION

AUTOMATED REFUELING AT LENINGRAD'S PULKOVO AIRPORT

Leningrad LENINGRADSKAYA PRAVDA in Russian 6 Nov 85 p 4

[Article by M. Tarasov: "An Hour Before the Flight"]

[Text] At Pulkovo Airport the country's first domestic automated plane refueling system has gone into experimental operation.

Aeroflot passengers are not, as a rule, aware of the strenuous and difficult work of the ground-based services. Any one of us, on arriving at the airport, registers his ticket and then, having heard the announcement on the radio, goes to board. In all this we glimpse the platform, where the planes are standing, only in passing.

And this place has a life of its own. Together with the chief of the fuel and lubrication materials service of the Pulkovo Airport, A.V. Vasilyev, we go from airliner to airliner. The passengers have just left one of them. In the door of another stretched hoses that had brought warm air, heating the cabin--boarding will be soon. And at every plane people were working: examining the engines, chassis and navigating equipment. They have only an hour and must manage to notice or to hear any defect and eliminate it, guaranteeing the safety of the flights.

We stop by a TU-154. It will soon be on its way. As usual, a taut hose rises to the wing--refueling is in progress. And I only now notice that the accustomed tank truck is not beside the plane. The airliner brings to mind a car at a filling station, with the only difference being that the station is hidden beneath the ground.

"The automated plane refueling system is a highly involved engineering complex," says Aleksandr Vasilyevich. "It consists of reservoirs where the fuel is stored, pumping stations, many kilometers of pipelines and effective firefighting equipment. The Glavleningradstroy Trust No 16, Lengazteplotroy, Soyuzprombunmontazh and other organizations built it. Specialists from our service made what contribution they could."

Refueling of the plane lasted 25 minutes. In that time it took on board 30 tons of fuel.

"Before we would have lost 40-50 minutes. This is the kind of time we save on only a single plane..."

The automated refueling system will provide the opportunity to improve the organization of operations, reduce the number of unwieldy bowzers, make it easier to maneuver the planes around the apron and reduce their time on the ground.

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CIVIL AVIATION

'SIRENA-2' AUTOMATED TICKET SALES SYSTEM OPERATIONAL

Moscow VOZDUSHNYY TRANSPORT in Russian 28 Dec 85 p 2

[Article by D. Khrapovitskiy under the "Instant Report" rubric: "Prospects for 'Sirena'"]

[Text] Yesterday in Moscow, the interdepartmental commission approved for commercial operation the Sirena-2 nationwide automatic control system for ticket sales and seat reservations.

Even in test operation, the Sirena-2 system saved 12 million hours for over 25 million passengers this year. That's quite an accomplishment!

Putting the Sirena-2 system into commercial operation is an important step, fulfilling the party's requirements for accelerating scientific-technical progress.

Today, the Sirena-2 system connects 10 centers, serves 115 cities, contains 800 terminals and saves airline passengers 12 million hours per year. In the 12th Five-Year Plan, its work volume should more than double.

"As far as system reliability is concerned," said its general designer, V. Zhzhikashvili, speaking before the commission on the results of Sirena-2 test operation during the 10th and 11th Five-Year Plans, "it was 99.3-99.4 percent in the Moscow Center."

All of the system elements are greatly expandable in the 12th Five-Year Plan. The system can guarantee not only superfast sales and reservations of airplane tickets. It is also prepared to make available part of its capacity for automating other processes in civil aviation. Other functions unrelated to ticket sales will be developed in the system; in particular, information.

The great contributions by several collectives to the development, realization and, mainly, implementation of the Sirena-2 system must be recognized. The Main Computer Center was the lead organization of MGA [Ministry of Civil Aviation] in the development of Sirena-2. The Main Air-Service Agency of MGA was the general customer for the system and developed the automated ticket-sales technology for all the country's air-service agencies. The TsNII ASU GA [as published] Institute was the lead organization in MGA for implementing the automated control systems.

MOTOR VEHICLES AND HIGHWAYS

TARIFF APPLICATION IN AGRICULTURAL PRODUCT HAULING

Moscow AVTOMOBILNYY TRANSPORT in Russian No 8, Aug 85 pp 47-48

[Article by A. Pilipchenko of the Scientific Research Institute for the Organization of Agriculture, Kiev: "Economics, Planning and Management: The Application of Tariffs in Agricultural Shipments"]

[Text] The fulfillment of the USSR Food Program depends to a large extent on the efficiency of the transport service of agricultural enterprises. An important area for increasing the efficiency of motor-vehicle transport in agricultural shipping is improving the interrelationships between motor-transport enterprises and the agro-industrial organizations they serve, based on a closer coordination of their economic interests and directed toward the achievement of high end results in agricultural production.

A tariff system should coordinate the economic interests of motor-transport enterprises and those agricultural enterprises they serve. The existing procedure for paying for freight shipment (price list No 13-01), however, takes into account only quantitative indicators--the volume of shipments and delivery distance of the freight, while at the same time that, for agricultural enterprises, great significance is assigned to the time factor--the timeliness of delivery in optimal agricultural-technical time periods. Thus, according to the data of the All-Union Sugar-Beet NII [Scientific Research Institute], with an increase of 1 day in the interval between the digging up and carting out of sugar beets from the field to the receiving station, weight losses of up to 3 percent can occur. The elimination of these losses would make it possible for farms to obtain additional income on the order of 800-900 rubles for every 1,000 tons of shipped beet.

The necessity of executing harvesting operations in compressed time periods creates corresponding demands on transportation, the fulfillment of which ultimately entails an increase in the cost of shipping. Proceeding from this, it would be expedient to differentiate the charges for agricultural produce shipments by time period of delivery. This would make possible an increase in the vested interest of motor-transport enterprises in the execution of shipments in the optimal agricultural-technical time frames.

Since the implementation of shipping in compressed time frames entails additional expenditures, including expenditures for the creation of a reserve of transportation equipment, the organization of efficient dispatcher shipment

control, etc., the tariff charge for these types of shipments should be higher than those in effect today. For agricultural enterprises, additional expenses due to an increase in the tariff charge for especially urgent shipments executed according to a special schedule (mode of operation) will be recouped as a result of reductions in produce losses and spoilage in the process of delivery to the consumer.

The currently effective tariffs do not take into account such shipping conditions as the state of the road surface. Consequently, motor-transport enterprises have no interest in carrying out shipments for agricultural enterprises, especially on dirt roads.

Table 1

The Efficiency of Motor-Vehicle Utilization for Shipping Sugar Beets (shipping distance 30 kilometers)

Модели автомобилей (1)	Грузо-подъем-ность, т (2)	Тарифная ставка, руб/т (3)	Группа дорог (4)					
			I		II		III	
			Себестоимость перевозки, руб/т (5)	Рентабельность, % (6)	Себестоимость перевозки, руб/т (5)	Рентабельность, % (6)	Себестоимость перевозки, руб/т (5)	Рентабельность, % (6)
ГАЗ-52-04	2.8	2.38	2.44	-4.4	2.41	-10.6	3.09	-24.8
ГАЗ-53А	4	2.05	1.89	6.3	2	0.8	2.38	-15.6
ЗИЛ-130	6	1.6	1.54	1.8	1.63	-3.8	1.93	-18.3
ЗИЛ-130 и ГКБ-817	10.5	1.6	1.28	22.5	1.35	-16.1	—	—
ЗИЛ-133Г1	8	1.6	1.79	-12.4	1.86	-15.7	2.19	-28.4
КамАЗ-5320	8	1.6	1.53	2.5	1.61	-2.8	1.96	-20
КамАЗ-5320 и ГКБ-8350	16	1.6	1.11	41.3	1.16	-35.2	—	—
ГАЗ-САЗ-53Б	3.5	2.47	2.31	4.8	2.47	—	—	-19.3
ЗИЛ-ММЗ-554	4.8	2.14	1.85	13.4	1.96	-7	2.34	-11.8
ЗИЛ-ММЗ-554 и ГКБ-819	10.5	1.44	1.24	48.4	1.31	-27.8	—	—

Key: 1--truck model; 2--carrying capacity, tons; 3--tariff rate, rubles/ton; 4--road class; 5--shipping cost, rubles/ton; 6--profitability, %; 7--GAZ-52-04; 8--GAZ-53A; 9--ZIL-130; 10--ZIL-130 and GKB-817; 11--ZIL-133G1; 12--KamAZ-5320; 13--KamAZ-5320 and GKB-8350; 14--GAZ-SA3-53B; 15--ZIL-MMZ-554; 16--ZIL-MMZ-554 and GKB-819.

Specially executed research shows (see Table 1) that the cost of shipping on class III roads (dirt roads in poor condition) is 25-30% greater than on class I roads (improved-surface roads). The tariff rate for delivery is the same in both cases, however. As a result, motor-transport enterprise expenses for carrying out shipments on class III roads over the resultant average beet delivery distance of 30 kilometers, as can be seen from the table, are not recouped. This circumstance is currently also the main reason that motor-transport workers do not want to carry freight shipments for isolated rural areas, where road conditions are even more unsatisfactory.

In the sectional method of truck operations in conjunction with harvesting units, the profitability of shipping is somewhat higher. Even in this case, however, trucks of most makes and models operate at a loss. Thus, in hauling potatoes directly from the harvesting units, operations are profitable only with the GAZ-53A and ZIL-130 side-loading trucks (see Table 2), but their use is less efficient than medium-capacity dump trucks as a result of higher labor expenditures on unloading. In hauling potatoes directly from the combine,

truck productivity is 15-27% less, and the shipping cost is 20-23% greater, than in operations on class II roads due to truck operations in the field in lower gears.

Table 2

The Efficiency of Truck Operations in Potato Shipments
(shipment distance 30 kilometers)

Модели автомобилей (1)	Доходная ставка (прейскурант № 13-01-02), руб/т (2)	Перевозка картофеля от сортировочного пункта (по дорогам III группы) (3)			Перевозка картофеля непосредственно от уборочного комбайна (4)		
		производи- тельность, (5) т/ч	себестои- мость, руб/т (6)	рентабель- ность, % (7)	производи- тельность, (5) т/ч	себестои- мость, руб/т (6)	рентабель- ность, % (7)
GAZ-52	0.68	2.5	0.56	19	1.9	0.77	-13.5
GAZ-53B	0.66	3.9	0.55	17.6	3.3	0.66	-3
GAZ-53A	0.65	3.2	0.48	32.7	2.7	0.59	7.8
ZIL-130	0.58	3.6	0.42	35.3	2.8	0.51	11.6
ZIL-MMZ-554	0.5	5.7	0.45	8.9	4.1	0.54	-9.3
ZIL-133G1, KamAZ-5320	0.5	4.1	0.4	22.5	3	0.49	0

Key: 1--truck model; 2--income rate (price list No 13-01-02), rubles/ton; 3--potato shipment from sorting station (on class III roads); 4--potato shipment directly from the harvesting combine; 5--productivity, tons/hour; 6--cost, rubles/ton; 7--profitability, %; 8--GAZ-52; 9--GAZ-53B; 10--GAZ-53A; 11--ZIL-130; 12--ZIL-MMZ-554; 13--ZIL-133G1, KamAZ-5320.

To all appearances, for equalizing transport equipment economic operating conditions as well as raising the vested interest of motor-transport enterprises in carrying out shipments in the most progressive flow-line method, the level of tariff rates should be differentiated depending on the road conditions. It is also necessary to incorporate special prices for servicing harvesting units.

In accordance with the currently effective price lists, the value of the tariff rates for shipping freight by truck transport is differentiated depending on the size of the shipment. In these conditions, the profitability and amount of profit received become the bases for economic indicators determining the selection of the most economical transportation equipment by the motor-transport enterprise. Thus, when the weight of the shipment increases from 3.5-4 to 4.5 tons, the value of the tariff rate per ton of shipped freight (in operations in standard agricultural conditions) decreases by 8.9% at the same time as the shipping cost decreases by only 2.4%. When the weight of the shipment increases from 4.5 to 5 tons and higher, the tariff decreases by 14.6%, but the cost by only 9.8%. As a result, shipping profitability declines.

In connection with the fact that the size of the shipment in bulk shipments is determined by the carrying capacity of the transportation equipment, there is no vested interest on the part of the motor-transport enterprise to use highly-productive multi-ton trucks and trailer trucks, and this narrows their sphere of application in agricultural freight shipping. At the same time, the establishment of a fixed tariff rate for shipment groups of 5 tons or greater

does not induce kolkhozes and sovkhoses to create conditions for the use of multi-ton trucks and especially trailers.

Table 3

Economic Operating Indicators of Motor Transport Depending on the Shipment Size (class I freight, class II roads, shipping distance 25 kilometers)

(1) Размер отправки	(2) Величина тарифной ставки		(3) Собственность перевозчика		(7) Рентабельность, %
	(4)		(4)		
	руб/т	в % к ставке от 2 до 2,5 т (включительно)	руб/т	в % к ставке свыше 2,5 т	
(8) От 3,5 до 4 т (включительно)	1,8	86,5	1,67	76,3	8,4
(9) От 4,5 до 5 т (включительно)	1,64	78,8	1,63	74,4	-2,7
(10) Свыше 5 т	1,4	67,3	1,47	67,1	-6,7

Key: 1--shipment size; 2--tariff rate value; 3--shipment cost; 4--rubles/ton; 5--as a percent of shipment from 2 to 2.5 tons (inclusive); 6--as a percent of shipment greater than 2.5 tons; 7--profitability, %; 8--from 3.5 to 4 tons (inclusive); 9--from 4.5 to 5 tons (inclusive); 10--greater than 5 tons.

In the interest of a more rational use of transportation equipment, it would be expedient to differentiate the level of tariff rates in accordance with changes in shipping cost depending on the size of the shipment. The level of profitability of freight delivery should remain stable for various shipments.

The efficiency of the transportation service of agricultural enterprises depends to a great extent on the methods of organizing shipments. At the same time, the tariffs for freight shipment by truck transport (aside from exceptional tariffs) do not take this into account. Thus, a highly efficient method of shipping sugar beets is by tandem tractor trailer. Their use, however, requires the unhitching and towing of trailers by the harvesting unit or beet loader along a broken-up field by a kolkhoz (sovkhos) tractor. It turns out that the transportation organization obtains additional profit, and the kolkhoz, on the other hand, suffers additional expenditures for tractor operation. Overall, the shipment of beets by multi-ton tractor trailer is more efficient than by single truck.

In this regard, it is necessary to stipulate in the tariffs that motor-transport enterprises have the right (or are obligated) to provide material incentives to freight shippers (freight recipients) that are not paying for the executed shipments (as in the example cited above), for cooperation in incorporating progressive methods of shipping, as a result of which the productivity of transportation equipment increases and shipping costs decline.

The shortcomings noted above in the application of tariffs in the shipping of freight by truck transport determine the characteristics of truck use in agriculture. Therefore, special tariffs (sections) and rules for their use should be developed that take into account the specific character of motor-transport organization operations in serving the industries of the agricultural-industrial complex.

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MOTOR VEHICLES AND HIGHWAYS

BRIEFS

IMPROVED OFF-ROAD KRAZ TRUCKS--The AvtoKpAZ association has acquired the productive capacity for a future series of highly uniformized vehicles with increased reliability--the KRAZ-250 and KRAZ-260. The new design embodied superior achievements of domestic automobile construction. The heavy-freight, all-terrain vehicles with 3 drive axles, while considerably increasing carrying capacity, consume 10 percent fewer materials per unit than the predecessors. Such is the result of design advancements, the use of progressive designs of rolled products and alternative metals. Added conveniences have been created for the driver, ensuring work comfort in hot and cold weather. Based on the basic model, powerful dump trucks, log trucks and tractor-trailers have been created. According to the calculations of specialists, the use of such equipment will raise the productivity of labor in transportation work by 50 percent and free thousands of drivers. The novelty demanded qualitative renewal of production. The country's leading automotive plants, manufacturers of various machine tools, complex dies, and other equipment, helped accelerate its reconstruction through automation and robotization. [By A. Palant] [Text] [Kiev PRAVDA UKRAINY in Russian 8 Jan 86 p 3] 13110

MOSCOW-KHARKOV HIGHWAY CONSTRUCTION--Serpukhov, Moskovskaya Oblast (TASS)--The Moscow-Kharkov-Simferopol Highway, which is being constructed, will allow a reduction in the travel time for transport vehicles going from the capital to the Crimea. The next stage of this express highway, from Serpukhov to the Oka River, will be approved for operation by a state commission. There are plans for the construction of service points, and technical assistance and fueling stations. "Judge for yourself," says O. Dyakonov, chief of the Main Administration for Highways Construction's technical department, "by travelling along such an improved roadbed a vehicle depreciates less, requires less fuel and traffic safety is increased. [Text] [Moscow STROITELNAYA GAZETA in Russian 10 Jan 86 p 2] 13110

ARMENIAN LNG FILLING STATION--Yerevan (IZVESTIYA)--Armenia's first liquid natural gas [LNG] filling station has become operational. It is capable of servicing up to 600 vehicles a day. This is not a large number, of course, but there are only 800 vehicles in the republic operating on natural gas. These are taxis and vans for the delivery of food and industrial products within the precincts of Yerevan. [By correspondent S. Bablunyan] [Text] [Moscow IZVESTIYA in Russian 20 Jan 86 p 2] 13110

PRIPYAT RIVER BRIDGE COMPLETE--Zhirkovichi (Gomel Oblast)--A 3-kilometer embankment and a 900-meter vehicular bridge united the banks of the major river, wooded Pripyat, near the ancient city of Turov. The kolkhozes "Novaya Zhizn", "Pobeda" and imeni "Zhdanov," on the other side of the river, gained, for the first time, reliable transport communication with the rayon's center. Previously ferries operated only during the summer. In winter, equipment was ferried across the river directly on the ice. The new bridge proved to be quite opportune also to the residents of one the most remote areas, the Stolinskiy Rayon of Brest Oblast. It reduced the distant from their rayon to Minsk by more than 100 kilometers. [By V. Legankov] [Text] [Moscow SELSKAYA ZHIZN in Russian 22 Jan 86 p 1] 13110

YerAZ-3730 PANEL TRUCK DEVELOPMENT--Armenian SSR--The first experimental-production run of YerAZ-3730 trucks was completed at the Yerevan Truck Plant. The trucks are designed to carry small batches of goods and have a carrying capacity of one ton. [Text] [Moscow IZVESTIYA in Russian 22 Jan 86 p 1] 13110

POOR-QUALITY MOPED ENGINES--"Indulgences for Waste" is the title of L. Sotnik's correspondence, published on 31 December 1985. The reason for the publication was the fact that every fifth moped produced in 1985 by the Lvov Motorcycle Plant proved to be of poor quality. One of the major reasons for the defective output is the low quality of engines produced by the Shyauliyayskiy Moped-Engine Plant, "Vayras." In a response by K. Zaletskas, secretary of the Shyauliyayskiy Gorkom of the Lithuanian Communist Party, it is stated that the newspaper article was reviewed in the gorkom buro. The criticism is acknowledged as correct. The low quality of the Vayras plant's production was already a topic of discussion in the party gorkom. The management had not come to the necessary conclusions. Therefore, the gorkom buro imposed severe party penalties on the communists--Yu. Bronushas, plant director; A. Polyakus, chief engineer; and R. Brazhunas, the enterprise's party committee secretary. Other communist officials were called to account by a resolution of the plant party committee. Furthermore, the response draws attention to the fact that the Ministry of the Automotive Industry devotes insufficient attention to matters of quality at the enterprise. The on-going renovation of the plant, begun in 1977, has been going on for an inadmissibly long time. Measures for improving the quality of products have now been worked out. Among them is the production of a new engine of a higher technical level. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 16 Feb 86 p 2] 13110

GAZ-24-10 VOLGA PRODUCTION BEGINS--(TASS)--The first GAZ-24-10 trucks have come off the conveyor at the Gorkiy Motor Vehicle Plant. "The GAZ-24-10 has a number of advantages over the model which we are producing," said V. Shibalov, chief engineer for the production of automobiles. "The powerful engine from the Zavolzhye Engine Plant is equipped with a contactless ignition system, allowing an increase of the maximum speed to 150 kilometers per hour. The time for starting from a stop also decreased, and in addition, the vehicle has become more stable." Other advantages are primarily related to the creation of comfort for the driver and passengers. A compact dashboard, simple and easy steering and a tastefully selected decorative finish, all

characterize the new vehicle. One can say, that only the body remains from the former Volga, and more than 100 modifications are incorporated into it. By the opening day of the party forum of automotive workers, production will be completely converted to the 1986 model. [Text] [Moscow IZVESTIYA in Russian 25 Jan 86 p 1] 13110

NEW VEHICLE PARTS CAPACITY--Smolensk--New production capacity has been placed in operation at the Smolenskiy Automotive Machinery Plant, which is a part of the MosavtoZIL association. This plant will turn out 4.5 million rubles worth of products annually, including parts for the ZIL. For the past 3 years the engineers of the Smolensk Directorate of the TETs-2 combine of Western Electric Power Plant Construction [Zapenergostroy], and the manufacturers at the Smolensk plant have been working closely, according to cooperation agreements. As a result, during the last 3 years 10.8 million rubles of production capacity have been placed in operation. [By N. Starikov] [Text] [Moscow STROITELNAYA GAZETA in Russian 9 Feb 86 p 3] 13110

CSO: 1829/95

RAIL SYSTEMS

MINISTER KONAREV ON RAILWAYS SECTOR SUCCESSES, TASKS

Moscow GUDOK in Russian 6 Feb 86 pp 1-2

[Article by USSR Minister of Railways N. S. Konarev: "The Chief Economic Indicator--Ways of Raising Labor Productivity and Intensifying Production"]

[Excerpt] The effort to achieve the world's highest labor productivity has special economic and political importance.

The USSR has the world's highest density of freight traffic, exceeding that of the USA by five times; we use a locomotive twice as efficiently as American railroads, and a freight car 2.7 times as efficiently. The shipping cost is 3.2 times less.

As shown by statistics, Soviet rail transportation is also much closer to the highest world level of labor productivity than other chief sectors of our economy--industry, construction and agriculture. Only the railroads of the United States are ahead of us, where this indicator is 15 percent higher.

An increase of 10-12 percent in the labor productivity of the steel mainlines is envisaged in the draft of the Fundamental Areas of Economic and Social Development of the USSR. Taking this target as a plan minimum, the Ministry of Railways sets the task of raising labor productivity by 18-20 percent in the 12th Five-Year Plan. This will make it possible to reach the highest world level.

There is confidence that this aim is attainable. The pledge of success is the fact that an army of millions of highly qualified people dedicated to their cause are laboring in transportation who are able to accomplish the tasks assigned by the party. The decisive transition that has begun in the industry toward intensive management methods will make possible the efficient and highly profitable use of the powerful productive potential at the disposal of railroad transport and direct existing reserves onto a new course.

The Strategy of Development

The material and technical basis of transportation was further developed over the years of the last five-year plan. The total length of railroads now exceeds 145,000 kilometers, of which more than 51,000 are double-tracked. Almost 50,000 kilometers are electrified. No other country has at its disposal such a network of the most progressive electric traction on which such a considerable volume of freight and passenger transportation can be carried out. A considerable portion of our railroads are equipped with automatic blocking

systems and centralized dispatching. Two thirds of the switches are electrically centralized. Heat-treated heavy-duty rails are laid on the majority of the high-traffic sections. Continuous-welded track is laid on many sections, comprising more than a quarter of the network by length.

The intensively developing economy and the assimilation of new regions in the eastern part of the country are also causing considerable growth in shipping requirements. This defines the necessity of further reinforcing the productive basis of transportation and its technical retooling and reconstruction.

A program of operations that must be executed in the 12th Five-Year Plan has currently been defined. Also defined are the amounts of state capital investment for its realization. The chief task is to utilize the allotted funds thriftily, assiduously and with the maximum effect and to determine those links where the minimum expenditure can have the greatest practical return.

Efforts should be directed first and foremost toward the elimination of bottlenecks and the liquidation of imbalances in the development of individual sectors so as to obtain on this basis considerable growth in the traffic, shipping and handling capacities of entire routes. Manpower and equipment should be concentrated in the key sections for this, so that it is possible, using the organization's own resources, to persistently conserve resources, lower the cost of facilities and demonstrate maximum flexibility. We will be adhering to such strategy and tactics in capital construction.

Much is being done to equip transportation with new electric locomotives, diesel locomotives, and freight and passenger cars. The operational car fleet has been substantially renovated over the last decade. The railroads have received cars of high freight capacity and volume, many of which are specialized. This makes possible a raising of the level of freight operations, a reduction of labor expenditures on loading and unloading operations and the development of heavy-weight traffic and large car loads.

The problem of improving the technical characteristics of the rolling stock, however, remains exceedingly severe. First and foremost, it is essential that carbuilding plants master the mass production of eight-axle open cars as soon as possible, increase the output of high-capacity tank cars and begin to supply boxcars with large body volume.

There are important areas of technical progress where many unresolved questions remain. In particular, in the mechanization and automation of many labor-intensive operations and in the utilization of computers for collecting information and controlling shipping. Approximately a third of railroad workers are still occupied with manual labor. Its proportion is especially great in the car, track and locomotive sectors.

The integrated mechanization and automation of heavy labor-intensive operations that are executed by hand, frequently by women, is not only an economic, but also a most important social task. It is impossible to delay in this matter. In quite a short time, it will be impossible to find anyone willing to do this heavy and nonprestigious work.

Most of the necessary mechanisms, instruments and apparatus has been created. The accelerated development of machine-building projected by the party inspires confidence that the supply of equipment to the railroads in the next few years meeting modern requirements will increase sharply. Moreover, much can and must be done with our own manpower, in our plants, in the railroad shops, depots and at other enterprises of railroad transportation.

It is especially important to raise the reliability of the rolling stock. Due to the fact that it is not always up to the mark, especially the diesel locomotives, considerable losses are incurred. This necessitates large unjustified labor expenditures in both repair and operation.

We expect that, taking into account the high level of intensity of USSR railroad operations, the machine builders will provide transportation with equipment whose quality and reliability will exceed the level of the best world models.

The technical renovation of transportation equipment in combination with the persistent incorporation of fundamentally new, progressive technologies and the radical improvement of the organization of production in all sectors of our multifaceted economy--this is the mainline to the highest limits of world labor productivity.

We have many reserves for achieving this aim. This is visibly demonstrated by an analysis of operations over the last three years of the 11th Five-Year Plan and especially the past year.

Increasing the Rate of Shipping

Having begun the year 1985 with serious failures caused by the surprises of a harsh winter and miscalculations in operational preparations for it, the railroad workers from May to December were not only able to compensate for the enormous losses suffered in the first four months, but to overfulfill the yearly plan for freight shipment by 36 million tons and to handle with honor their socialist duties according to this chief volumetric indicator. The five-year plan was also exceeded by 52.2 million tons.

The growth of shipments in the 11th Five-Year Plan was twice as much as in the 10th. And this is in spite of the fact that 62.4 million tons less than envisaged were shipped in 1981-82.

In the period from May to December of last year, the railroad workers demonstrated an example of highly productive, truly selfless and heroic work. The growth in shipping was 114 million tons greater than in the corresponding period of 1984. Over the eight months, 90 million tons of various economic production was shipped in excess of the plan. This is tantamount to transportation working extra days every month.

The concluding year of the last five-year plan taught us much: both how to operate so as to achieve success and reach high levels, and how difficult it is to set matters straight after failures and to catch up after lags. All

transportation commanders and railroad workers should draw for themselves the most serious and educational conclusions. It is easy to cut back the rate, but very difficult to raise it and make up for losses. Today it is extremely complicated to catch up not only every lost day, but every hour and every minute as well.

The formula for labor productivity is very simple. In the numerator is the freight turnover in ton-kilometers, and in the denominator is the number of workers directly occupied with shipping. This means that labor productivity should be raised by increasing the volume of shipping and reducing labor expenditures on carrying it out.

The 1986 plan stipulates the shipment of 3.98 billion tons of freight. An analysis of the socialist obligations adopted by the railroad collectives showed that this volume can be surpassed and no less than 20 million tons in excess of the plan can be shipped, including 8 million tons by the opening day of the 27th CPSU Congress. This will permit reaching the four-billion-ruble level in the very first year of the five-year plan. The workers of the industry are successfully realizing the adopted obligations. In January, 10.7 million tons of freight were shipped in excess of the plan.

It is important to stress again and again: a smooth rhythm is necessary to reach the projected levels. A billion tons must be shipped every quarter, approximately 11 million tons every day. This will also permit the accomplishment of the chief task placed before the railroad workers by the party and the government: to provide the full and timely satisfaction of the shipping needs of the economy.

On the Basis of Directed Programs

How to achieve this rate and rhythm in practice? How to back up words with deeds? What reserves should be activated first?

To assimilate the growing freight traffic, those principal reserves whose application made success possible in the past year should be utilized. But this must be done still more energetically, decisively and purposefully. For that that was, as they say, lying on the surface has been realized to a significant extent.

The Ministry of Railways, using a broad circle of scientists, transportation specialists and production innovators, developed a set of directed scientific and technical programs aimed at intensifying the shipping process. The broad development of heavy-weight traffic was stressed, along with increasing the speed of passenger and freight trains, the integrated mechanization and automation of production processes, and the incorporation of an automated shipping control system.

In the programs, the principal targets are clearly indicated, expenditures are determined, and the economic savings that should be received are established, not only in rubles but in the freeing up of people and the conservation of material and energy resources.

The first directed program is devoted to increasing the weight of trains. And this is understandable. Under the limited traffic and shipping capacity of a number of routes in the network, the further growth in the weight of trains has paramount significance. This is one of the most important ways of intensifying the shipping process, allowing a smaller number of workers to carry out a large volume of shipping.

Last year, the average train weight increased by 78 tons and reached 3,033 tons, and it grew by 214 tons overall over the five-year plan. Such an increase was earlier achieved over two five-year plans.

The ministry will strive persistently for the consistent, rigorous realization of the directed scientific and technical program for increasing train weights. The issue is to ensure regular traffic as stipulated by the schedule and technology with the largest possible number of trains of 8,000-16,000 tons on the 49 most important routes--from the places of route formulation to the appointed destinations.

There are significant shortcomings in realizing the heavy-weight traffic program in practice. There is no systematic approach to this problem in many railroads, and radical technological reorganization is being delayed. Surely we cannot really be reconciled to the fact that last year the Alma-Ata, Southwestern and Azerbaijan railroads did not even achieve the plan indicators, not to mention fulfilling MPS [Ministry of Railways] targets.

For 1986 and later years of the 12th Five-Year Plan, the task has been set of increasing train weights by 100 tons so as to raise them by 500 tons over the five-year plan. The reality of this is convincingly demonstrated by the collectives of the October, Gorkiy, South Urals, Kemerovo, East Siberian and Baykal-Amur railroads, which successfully reached the 100-ton level last year.

The most major reserve, closely connected with a growth in train weights, is raising the static load of railcars. And we have energetically undertaken this in recent years, especially in 1985 when an unprecedented increase of 1,290 kilograms was achieved. As a result, it was possible to deliver 94 million tons of freight without using additional rolling stock. This entire volume of above-plan shipping was carried out in the shock-work period from May to December! And once again certain railroads--the Baykal-Amur, Dnepr, and Donetsk--exceeded the target by more than two tons, while others, although they fulfilled the plan, did not manage the MPS target. Conclusions must be drawn without delay. Demand for the realization of this major reserve on the part of MPS will be even greater.

The possibilities here are great. The freight capacity of cars is now about 80 percent utilized. The enlarged zonal clearance diagram should be more broadly applied in shipping forest products, and the all-round consolidation of freight in delivering free-flowing materials should be striven for more resolutely. More progressive plans for freight disposition in railcars must be persistently incorporated together with the shippers of products. It is necessary to adjust the selection of cars that can be loaded up to 80 tons. Opportunities should be utilized to combine heavy and lightweight freight.

There should be no tranquillity in general. It is well known that reserves are found by those who seek them, those who approach matters creatively, those who are not afraid to break outmoded procedures. Undoubtedly, bold solutions should be based on precise calculation. It is in no instance permissible that ill-considered consolidation in loading exceedingly complicate unloading and lead to the damaging of products and the rolling stock. Everything should be considered and estimated. But in all of this the cause should be advanced.

The realization of the Skorost directed program has great significance. Increasing the speed of passenger and freight train traffic along with a large economic saving will signify a significant step forward in improving the whole technology and organization of labor.

An important indicator of the intensity and rhythm of the operation of the shipping conveyor is the transfer of railcars at the junctions between railroads. An increase in transfers means that train speeds are increasing and freight delivery times to the intended destinations are being reduced, the rolling stock is being better utilized, idle time is decreasing, and, in the final tally, labor productivity is increasing. For every railroad, transfers are still an indicator of the precision of interaction between neighbors and the coordination of operations at junctions.

All railroads have received the MPS targets for daily car transfer. They are composed of such calculations that a total of 400,000 car transfers a day will occur on the whole network. Reaching such a level will signify the ascent of operational work to a new and higher level.

For precise, rhythmic and highly productive operations, it is exceedingly important that the unimpeded reception of trains by all stations is ensured, especially at junctions. The collective of the Southern Railroad displayed such an initiative. It was approved by MPS and the central committee of our trade union and has a positive effect. But we are still far from fully ensuring the unimpeded reception of trains everywhere, and losses due to this are still too great. They should be reduced to nothing. It is impermissible for the shipping conveyor to break down due to upheavals at junctions. This should be dealt with from the very beginning of the year, and be dealt with as it should be.

Today it is impossible to control shipping in the old way. Exceptionally great significance is therefore assigned to the broad automation of the operational control of shipments using computers with the obligatory improvements in the structure of the dispatcher management of both train traffic and locomotive operation, railcar distribution etc.

In automation, the receipt of information immediately from registering apparatus without human intervention should be striven for, as is done at Krasnyy Liman Station. The incorporation of such an efficient system is projected at 25 stations in the current five-year plan.

Automation and modern electronic equipment should find the broadest application in all sectors of our industry--in railroads and divisions, in plants and

in metro systems, and in every enterprise. What should be done specifically for this is outlined in detail in the directed program for the development and efficient utilization of computer technology and automated systems for 1986-90.

To work productively means to spend a minimum of time on the execution of each operation. The scientific and engineering approach has enormous significance here. A convincing example is the experience of Beskudnikovo Station, of which GUDOK has written many times. The saving received there thanks to the creative application of econometric methods and computers for making local operations more efficient and reducing car idle time is quite large. It visibly demonstrated what good results are produced by utilizing the achievements of scientific and technical progress in resolving specific practical tasks.

A Smaller Staff

Until now the discussion has basically concerned factors permitting the assimilation of growing shipments. The 1986 plan envisages rapid growth in the labor productivity of railroad transportation in comparison with the rate of shipping increase. That is how it will operate over the whole 12th Five-Year Plan. The acute task arises of reducing labor expenditures for every operation. There is much potential for this. This was convincingly illuminated by an experiment conducted in the Belorussian Railroad.

The collective of the mainline demonstrated initiative of great state importance. The human factor was taken into account on all sides in reorganizing. Much was done in a short time on the mainline to raise production efficiency, improve shipment control using computers, and for the considerable growth of labor productivity. The organizational rebuilding was reinforced by serious technical and technological measures.

The accelerated incorporation of the achievements of scientific and technical progress and intensive technologies along with the mechanization of operations freed up 3,900 people. Review of the technical and technological standards, expansion of service zones, combination of professions, and a raising of qualifications produced a staff reduction of 3,600 people. Thanks to the automation of production processes and the transfer of locomotive and forming-up teams to one official, a further reduction in the contingent of 2,000 people was possible. Approximately 1,600 people were freed up as a result of the structural reorganization of administrative links.

The experiment was received with understanding and found active support in the railroad collective, and was conducted with the participation of literally all of its workers. The experiment became a personal matter in the full sense of the word for every worker, engineer and employee of the Belorussian Mainline.

Impressive results were achieved. Over two years of laborious organizational work, the productivity of labor on the railroad increased by 15.8 percent, including 10.9 percent in 1985. The cost of shipping was lowered by 3 percent. Profits in excess of the plan were achieved. Quantitative work indica-

tors were improved. And the main thing--11,000 workers were freed up on the railroad for use in other operations and in other industries of the economy. Shorthanded staffs were filled out. The railroad construction organizations in particular were strengthened. The material interest of the people in the results of labor increased--the salaries and pay rates of 85,000 workers were increased. For example, the wage rate of station duty workers increased by 70 rubles, and of train dispatchers--by 90 rubles. And this was done entirely using the railroad's own funds. That's how this most important socialist task should be resolved in railroad transportation!

The material interest of the people in executing a larger volume of work with a smaller staff undoubtedly played an important role in the achievement of success. The chief significance, however, belonged to the bold and innovative approach to the resolution of problems and the rejection of everything outmoded, of the inertia of reflection and of backward concepts in organizing production and resolving issues of a social and everyday nature. This noteworthy experience visibly demonstrated that it is possible to be innovative and enterprising while depending on the active support of the workers.

The Belorussian experiment is not over. It is continuing and broadening its scope. Appeals arrive at MPS and the trade-union central committee from the collectives of railroads and enterprises for the fastest possible transfer to the new manner of operation. The collegium of the Ministry of Railways and the presidium of the trade-union central committee adopted a resolution to expand the basic provisions of the experiment to eight more railroads in 1986-87: the Baltic, Lvov, Odessa, Moldavian, Southern, North Caucasus, Alma-Ata and Central Asian, as well as the Minsk metro system.

It is projected to raise the labor productivity on each of these mainlines by 15-16 percent over two years. The people who will have to compress their working time as much as possible will win as well. They will receive supplemental wages of up to 14-15 percent. Several tens of thousands of workers overall are planned to be freed up over a year thanks to the experiment. This alone will permit an increase in the productivity of labor over the whole railroad network of another 2.1 percent. Over the five-year plan, the transition by these eight railroads to the new manner of operations will produce an economic saving of 400 million rubles.

A search is being conducted for other effective methods of economic management of railroad transportation. A broad-scale economic experiment was begun this year on the Southwestern and Dnepr railroads and at a number of enterprises.

Life confirms time and time again that the improvement and incorporation of the scientific organization of labor and the application of real moral and material stimuli is the key to the major reserves for raising production efficiency. Analysis demonstrates that as a result of the incorporation of the scientific organization of labor, the requirement for labor resources occupied in shipping was reduced by 70,000 people. In the current five-year plan it is extremely necessary to achieve even better results. The assessment and improvement of workplaces and the all-round incorporation of profit-and-loss accounting have serious potential.

The role of the team form of organization and labor stimulation and attention to all that we broadly call the human factor is great. More than half of all railroad workers are now occupied in teams. Up to 85 percent of them work on a single order, up to 60 percent--with the application of a labor participation coefficient, and more than 20 percent--under profit-and-loss accounting conditions. The creation of enlarged integrated teams at stations and dispatcher stations produces positive results, judging by the experience of the Lvov Railroad.

In the organization of labor and the incorporation of its progressive forms, however, we still have many shortcomings in providing incentives for people and frequent manifestations of red tape and formalism.

The bonus system is currently inordinately complicated. Many types of bonuses and supplementary payments, and the indicators upon which they are calculated, lead to a situation where people frequently seriously do not know what the incentive is for. This diminishes the effect of material stimuli and does not have the desired effect. It is important to organize and present the matter so that each realizes and feels that to work poorly and halfheartedly is not advantageous to him personally. This will have an immediate positive effect on the whole course of the productive processes and on strengthening discipline and order in transportation.

We no longer have the right to be reconciled to violations of working conditions and locomotive team rest. Order can and must be established here in the shortest possible time. For this, the irresponsibility of the railroad and divisional dispatcher apparatus must stop.

Strengthening discipline and order is also a major reserve. Losses of time due to absenteeism, stoppages and nonappearance at work with the permission of the administration are equivalent to the daily failure to appear of many thousands of railroad workers. It is not necessary to demonstrate what a negative effect this has on the productivity of labor.

The safety of train traffic is primarily dependent upon discipline. The losses suffered by the railroads as a result of accidents, derailments and incidences of waste in operation are first and foremost a consequence of breaches of discipline. To do away with such a situation, a resolution was adopted that obligates all primary managers to devote themselves every day with especial attention to issues of traffic safety. This procedure is established everywhere--at enterprises, in divisions, in railroads and in the ministry. On the one hand, it will make it possible to strengthen discipline and to heighten the responsibility of commanders and all railroad workers for the matter at hand and for the uninterrupted operation of the shipping conveyor, and on the other hand, it will make possible the accelerated execution of technical, organizational and technological measures ensuring the safety of train traffic.

Managing Competently and Efficiently

The policy of the utmost intensification of production and sharply raising its efficiency requires the reorientation and serious and basic reorganization of

the operation of the economic services of transportation. They are often ascertained here by already accomplished facts, but it is necessary to foresee and avert miscalculations and to suggest to operational workers which reserves to place into effect in the first place, striving to make the economic controls and stimuli operate at full force. And, of course, the management of enterprises and subunits should themselves look more deeply into economics.

With the aim of radically reorganizing economic activity, developing strategy in this important matter, determining the ways of expanding managerial independence at enterprises, strengthening the monitoring of the fulfillment of assigned economic and financial indicators, and working out proposals directed at raising the efficiency of production, MPS has created a special commission on economic questions that is headed by the minister. Analogous commissions headed by the primary managers have been organized in the railroads and transportation enterprises. It is necessary to see that not one of our enterprises operates at a loss, and that all of them without exception are highly profitable.

Literally every sector of our industry has its own reserves for raising labor productivity. And they should be placed at the service of the five-year plan. We will strengthen the responsibility of the main administrations of the ministry and the railroad control services for raising the labor productivity of the workers of sectors subordinate to the industry.

How to utilize not only the operational staff, but the entire remaining staff should be attentively investigated. To discover at which enterprises and in what subunits the losses of work time are too large, and to take measures to eliminate such waste. It is especially unfavorable in this regard in the track and railcar sectors and in the construction organizations.

The workers occupied in subsidiary and support activities should be much better utilized, as well as where the contingent is maintained by so-called other sources. The return on the labor of these workers should be increased by expanding and raising the quality of services to passengers, enterprises and organizations.

Scientists and specialists should attentively review the existing standards practice and how effective the labor productivity indicators are. These indicators do not mobilize people everywhere to more efficient work and do not always reflect the real contribution of each collective to the overall result achieved in each sector. It is extremely important to establish local indicators of productivity for the repair and support shops of enterprises. The determination of labor productivity at plants and in the construction and domestic services organizations of transportation must be improved.

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RAIL SYSTEMS

ROUNDTABLE ON TIMBER SHIPMENT PROBLEMS

Moscow GUDOK in Russian 27 Dec 85 pp 1-2

[Article by M. Bulanzhe and A. Chursin: "Time to Act: Roundtable of GUDOK and LESNAYA PROMYSHLENNOST"]

[Text] The final year of the five-year plan is coming to an end. This was a difficult year for workers of the timber-shipping conveyor. As of today, the shortfall in timber shipments to consumers totals 570,000 railcars, due to various reasons.

The year was full of promise at the start. A broad program of cooperation was developed at a joint meeting between the Collegia of MPS [Ministry of Railways] and USSR Minlesbumprom [Ministry of Timber, Pulp and Paper and Wood Processing Industry]. This program was aimed at fulfilling the plans for production and shipment of forest products. And now 1985, for all practical purposes, is behind us. The results, as we can see, are disturbing. Therefore, the causes of this mess must be thoroughly analyzed. Bottlenecks in the conveyor must be identified and the conveyor must be made to operate reliably next year. This is all the more important in light of the recently adopted decree of the CPSU Central Committee approving the initiative of five all-union timber-industry associations, which have accepted higher obligations for timber harvesting and shipping.

A roundtable organized by two newspapers was dedicated to the problems of cooperation between railroads and logging enterprises. Administration and department managers of MPS, USSR Minlesbumprom and Soyuzglavles [Main Administration for the Supply and Sale of Forest Products, of the USSR State Committee for Material and Technical Supply] took part in the conference, as well as scientists and representatives of the Central Committee of Allied Trade Unions.

The Bone of Contention

This is not the first time we have conducted such a meeting. But, perhaps, never before has it elicited such interest. Many questions had accumulated for the conference participants. Why did the decisions, made at such a high level, turn out to be unfulfillable? Who is responsible for the fact that narrow departmental ambitions are continuing at the timber shipping points, rather than labor cooperation between allied interests? After all, a common aim toward an end result is needed.

V. Vorobyev, deputy chief of Soyuzglavles, spoke. It was clear that the root of our present problems in the timber conveyor is a deficiency in planning. In V. Vorobyev's opinion, everything will fall into place if only the logging enterprises will carefully fulfill their production plans and if the railroads will provide a continuous supply of empty railcars. It seemed that Soyuzglavles has no problems in the area of rationalizing or materially improving freight traffic. Those cross hauls which take place in Tyumen Oblast, Kareliya and the Ukraine are due to local conditions and therefore do not require attention.

But then why do the statistics from Gosplan [State Planning Committee], Gossnab [State Committee for Material and Technical Supply] and MPS always clash when the annual timber-shipment tasks are approved? Why does this process lead to sharp, inconclusive discussions? For example, G. Lemeshchuk, chief of the MPS planning department of timber and construction-freight traffic, thinks that the annual requests of Soyuzglavles are systematically not confirmed by either the actual presence of timber, nor the operating practice of shippers and railroads.

Mr. Vorobyev's criticism and optimism do not stand up against the inefficient timber shipments. It is sufficient to say that during the present five-year plan, these were to be reduced by 14-18 billion ton-km. And, as A. Prokhorenko, chief of the transport administration, USSR Minlesbumprom, reported, there are already 14 billion in the account. So the effort was for nothing. This was confirmed by the calculations of V. Medvedev, chief of the department of traffic rationalization. According to his calculations, unnecessary operations on timber routes comprise about 7 percent of the total timber freight turnover. That represents a great loss! Another question still on the agenda is the length of timber shipments: it is 1.8 times the average for all freights.

But there is no doubt that the representative of Soyuzglavles was right when he said that raising product quality is one of the methods of combatting stupid (we're not afraid of using this word) freight traffic. This year, consumers rejected shipments of 500,000 square meters of building products. Not only were shipping funds wasted, but the timber was wasted...

Then how should forest-product traffic be planned? In the opinion of V. Batishchev, an expert in the transport department of USSR Gosplan, the arguments between these parties will continue until the annual and quarterly planning of timber production volumes, supply and traffic are concentrated in the hands of the loggers alone. This includes not only

timber of USSR Minlesbumprom, but also that harvested by so-called independent loggers (this still includes about 70 ministries and departments). According to the decree of the party and government on improving the use of timber resources, by 1990 all timber production must be concentrated mainly in the USSR Minlesbumprom system. This concentration should permit the demand for lumber to be brought into line with production planning. Even now, Soyuzglavles must pave the way for this transition.

Basic Shifts Are Needed

Let's be frank: no near-term improvement of traffic planning is in store. We know that the procedure of agreeing and coordinating interdepartmental documents of this type is very lengthy. But, as they say, root changes in the timber conveyor were needed yesterday. We're talking, of course, about scientific-technical progress. It's no secret that USSR Minlesbumprom has one of the weakest transportation systems of all sectors. It is no accident then, that as V. Andryushin, chief of the spur-track department, MPS, emphasized that despite the general trend of reduced railcar idleness in industrial transport, this indicator is over 2 hours higher than the norm on tracks of logging enterprises. Since the start of the year, potential loadings of tens of thousands of railcars have been lost.

Why does this occur? An exact explanation of this was given in the documents of the April 1985 CPSU Central Committee Plenum: "In most sectors, scientific-technical progress is sluggish, merely evolving: primarily by means of improving existing technologies and by partial modernization of machinery and equipment. Of course, these measures provide a certain payback, but it is too small. Revolutionary progress is needed: a transition to basically new technological systems, to latest-generation equipment, which will provide the highest efficiency."

This comment fully and completely relates to the technical and technological situation in the timber conveyor. We can say this directly: the lag here has been very protracted. This also applies to the flaws in the logging enterprises' technical policy on their logging operations. The development of basic production is out of proportion with that of transport facilities. The problem, as was brought out at the roundtable, is that the Transport Administration of USSR Minlesbumprom does not have the means to augment the equipment at its trackside storage areas: these funds distributed to the associations by the capital-construction administration. The transport administration only finds out what finances have been distributed to which projects after the fact. This means that the transport administration can't control or monitor this process. It is not surprising that in the present five-year plan, only about 70 percent of the funds allocated for the development of spur tracks in the sector have been utilized.

G. Davydov, chief of the Freight Operations Administration, Main Traffic Administration, MPS, emphasized that this is how a parasitical attitude develops toward railcars. Meanwhile, if railcar idleness could be reduced by 15 percent, traffic could be increased by 10,000 rolling-stock units. In addition, for comparison, the loading-resource expenditures for the

delivery of one million tons of timber are presently equivalent to those for shipments of five million tons of bituminous coal.

A. Prokhorenko, chief of the Transport Administration, USSR Minlesbumprom, agreed that more attention must be given to providing logging equipment. However, the railroads must consider the seasonal nature of logging. Winter, as is known, is the most active logging period. Therefore, he says, give us a steady number of empty railcars at that time, and the logging organizations will take care of the annual shipments plan. Alas, it is namely in winter, as a rule, that the level of delivered railcars drops sharply.

Yes, railcars are delayed on the tracks of logging enterprises. But why? To a great extent, it is due to the unsteady supply of rolling stock, as well as the fact that requests do not reflect the type of rolling stock. For instance, a complaint was recently received from lumber customers in Novorossiysk. The lumber arrived from Krasnoyarsk in a boxcar. They can't figure out how to unload it. And time is being lost...

We repeat: the mutual recriminations are largely justified. But, the atmosphere at timber-shipping points will not improve from bald statements of the facts. Logging and railroad organizations must take a completely different course during the next five-year plan. This is clearly stated in the draft Basic Directions: "Provide for the agreed-upon development of the Unified Transport System and its interaction with other sectors of the economy; improve the coordination of work of all types of transport; eliminate inefficient traffic; reduce shipping times; ensure the safety of shipments... More widely use progressive shipping methods; increase by 1.4-1.5 times the volume of containerized and packaged shipments; greatly raise the level of integrated mechanization of handling and repair work..."

What is the present state of packaged shipments? According to data from A. Prokhorenko, the task for this indicator will not be fulfilled this year. Firstly, the railroads have satisfied less than 50 percent of the demand for straps. But a critical factor is the lack of high-capacity handling equipment and packaging machines. No 16-ton cranes or packaging machines were received by logging enterprises during this five-year plan. During the next five-year plan, 60 of each are to be supplied. This will be a great help in the development of this progressive method. In addition, the railroads are promising next year to establish a minimum five-day reserve of straps at timber loading stations.

The growth of timber traffic on block trains could have a truly profound effect. After all, a railcar which is part of a block train is moving 70 percent of the time and idle for 30 percent of the time. Presently, only 18 percent of timber shipments are in direct trains, while this should be 35 percent. What's the stumbling block here? In the opinion of Comrade Davidov, the problem is the unprecedented dispersity of loading points: lumber is shipped from 2500 stations (including those of independent loggers). Out of this total, 355 stations ship less than 1 railcar per day, 700 ship less than 3 and 200 stations ship less than 5. The dispersity of unloading is no less a factor. From the Bratsk Division of

the West-Siberian Main Line alone, timber is shipped to consumers via 30 railroads.

It is clear that, firstly, timber handling must be concentrated in the most effective manner possible. Secondly, the terminating station, rather than just the terminating railroad, should be indicated in the comprehensive traffic plans. As M. Aleksandrov, chief of the MPS department of block-train shipping, rightly pointed out, this will make it easier to optimize traffic flows and will make it possible to more actively use computers in planning block-train routing. However, this argument, for some reason, was not supported by V. Vorobyev: he said that in the present situation, Soyuzglavles cannot provide addressing to the terminating station. A. Prokhorenko stated that Arkhangel Oblast and Komi ASSR have the necessary conditions for organizing a number of sectional block-train routes and that the transport administration is prepared to meet with representatives of MPS and Soyuzglavles to work this out. This comment delighted the participants.

One reserve which did not miss the attention of the roundtable participants was the expansion of the test area of zonal clearance. Yu. Lazarenko, sector chief of the All-Union Scientific-Research Institute of Rail Transport, gave the following figures. The use of zonal clearance permits a 20-percent weight increase for each car. This translates into an increase of 5 million tons of timber shipments annually. Unfortunately, this innovation has not become as widespread as it should be, although the formalities have already been completed. The specifications, agreed upon and approved by the MPS, are already in local hands. But the data for nine months of this year are: only 298,500 railcars incorporating the new technology were shipped, instead of the 509,600 planned. What is delaying the introduction of the new clearance? In particular, the sides of timber cars must be raised. It has been calculated that this will require about a million cubic meters of lumber per year, while no funds are being allocated to shippers for this. The fate of these higher railcar sides is causing alarm, because the upper sheathing is being removed during unloading, and scarce boards are simply being wasted.

The draft Basic Directions emphasizes the importance of more actively using specialized railcars. What is being undertaken by our scientists in this direction? Yu. Shevchenko, department chief of the Central Scientific-Research and Project-Design Institute of Mechanization and Power in the Timber Industry, told the roundtable participants of developments of new types of lumber cars. So far, only prototypes have been built. But we know how thorny the path is from initial development to series production: the Ministry of Heavy and Transport Machine Building, for example, has turned down this order, citing a lack of capacity.

And, finally, all the discussion participants were united in their opinion on the fate of rented rolling stock. V. Andryushin, chief of the MPS spur-track department, noted the extremely unsatisfactory use of these railcars. Idleness of these railcars was 20 times above norm at the Klaypeda TsBK [Cellulose-Paper Combine], 50 times above norm at the Vyborg TsBK, 4 times above norm at the Svetogorsk TsBK etc. These holdups are especially great during the navigation season, when timber is rafted to the

combines. It makes perfect sense, firstly, to eliminate the present fleet of "rentals." Secondly, in the opinion of specialists, these rental railcars should be transferred from the raw-material recipients to the authority of the shippers. This will guarantee more flexible, dynamic use of rolling stock.

After a Change in Attitude

It would seem that there is no need to prove the mobilizing force of labor competition between allied workers. However, it must be admitted that the heat of this competition has noticeably cooled since the start of the five-year plan. V. Fomin, deputy department chief of the Lesbumdrevprom Trade-Union Central Committee, noted that the atmosphere of the discussions caught his attention. A negative re-evaluation of values results when mutual contentions are overemphasized. And if this spirit is prevalent at the sector management level, then it can hardly be better in the workplace. Meanwhile, not only trade-union workers, but also enterprise management, must take part in organizing competition.

On his own behalf, S. Berzin, deputy department chief of the central committee of rail-transport and transport-construction trade-union workers, emphasized again that deficiencies in traffic planning have a deleterious effect on businesslike cooperation. What happened just recently in the Arkhangel Division of the Northern Railroad? Out of 43 timber-shipment stations, only 8 actually had timber. How can joint obligations be taken on under such conditions?

And anyhow, despite the truth of all these assertions, this attitude on the part of trade-union representatives is hardly justified. From them most of all we expected positive proposals on ways to strengthen the interaction of allied organizations. Who, if not they, should be thinking about raising the heat of competition, reviving the workers' relay race and improving the forms and methods of labor cooperation?

Unfortunately, the workers of allied trade unions didn't say that they intended to adopt and spread: 1) the experience of the Belorussian enterprises in the area of packaged shipments, 2) the through operating method for primary-storage-area brigades or 3) the activization of a creative search for innovators.

Thus, here are the basic proposals made by the majority of the roundtable participants:

concentrate the planning of production, supply and shipments of all timber freight in the hands of the logging enterprises;

the railroads should improve the supply of empty railcars to enterprises, especially in winter, and should fully satisfy the requests for semirigid straps;

activate work to concentrate the loading and unloading of lumber in order to raise the level of block-train traffic;

quickly solve the problem of allocating lumber funds to re-equip timber cars for the zonal clearance;

accelerate the implementation of new types of specialized rolling stock for timber shipments;

eliminate the fleet of rental railcars and transfer them to the ownership of raw-material shippers. In the annual plan for timber shipments, single out the volumes shipped in this type of rolling stock, taking into account progressive turnaround norms and full utilization of the weight and volume capacity of these railcars and

increase the role of trade-union organizations and enterprise management in the development of intersector socialist competition.

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RAIL SYSTEMS

TRANSPORT SUPPORT FOR THE AGRO-INDUSTRIAL COMPLEX

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[Article by Candidate of Economic Sciences K. U. Uldzhabayev, Tashkent: "Economic Issues: Transportation Support for the Agro-Industrial Complex"]

[Text] In realizing the USSR Food Program and resolving tasks in ensuring the stable supply of all types of food products to the population, an especially important role is reserved for animal husbandry and the processing sectors of the industry that make up the basis of the agro-industrial animal-husbandry complex (APZhK). Issues in transportation support for all areas of the APZhK occupy an important place in the successful resolution of these tasks.

Currently, all types of transportation ship a large quantity of building materials, mineral fertilizers, machinery, equipment and other material and technical resources for the APZhK, as well as balanced fodders, forage and all types of animal-husbandry materials and finished products in a wide assortment. More than 23 million tons of livestock products are shipped annually on railroads. The volumes of fish and fish products, meat and meat products, cattle, butter, cheeses and others are especially large. The stable functioning of the APZhK depends greatly on the fuller and more timely satisfaction of the shipping needs of the APZhK and an increase in the efficiency and quality of transportation support with minimal transportation costs and products losses in the delivery process.

The Development of Shipping

Railroad shipping of milk grew by 27 percent over the period from 1971 to 1980, and dairy products, butter and cheese by 12 percent. But the volume of milk and dairy products shipped on railroads has decreased somewhat in recent years. This is connected to the more intensive development of dairy-stock breeding near the areas of demand and the rapid growth of its shipment by motor vehicle. At the same time, the development and improvement of refrigerated railroad transportation made possible a broader exchange between areas, reflected in the increase of shipping distance. The transfer of a considerable amount of this freight to motor-vehicle transport also caused a growth in the average railroad shipment distance. Thus, from 1970 to 1983 the average delivery distance of milk on railroad transportation increased by 4 kilometers [km], of dairy products by 222 km, and of animal butter and cheese by 473 km.

The principal portion (more than 87 percent) of milk is shipped by rail from the Urals, West Siberian, North Caucasian, Volga, Central and Baltic economic regions to regions with high population density and to the locations of the major milk, butter- and cheese-making and milk-bottling industry enterprises. The West Siberian, Southwest, Baltic, Belorussian, Kazakhstan, Central-Black Sea, Volga, North Caucasus, Donetsk-Dnepr, Urals and Northwest economic areas make up the greater proportion of meat, meat products, eggs, butter, cheese and other dairy products shipments. These regions have the most favorable conditions for the intensive development of animal husbandry.

Currently approximately 30 percent of meat and subsidiary products are shipped on railroads in chilled form. The shipment of sausages, smoked meats and other meat products on railroads is tending to decrease, although in a number of cases some of them are shipped long distances, which is reflected in the growth of average meat-product shipment distance. It increased by 83 km over the period from 1970 to 1983.

The reduction in the growth rate of meat and meat-products shipping on railroads was made possible by the more rational disposition of the meat industry, as well as the rapid development of motor-vehicle shipping. Thus, the intensive development of poultry breeding and the construction of major poultry-breeding enterprises and combines near large cities has to a considerable extent reduced the rail shipment distance of these products.

The proportion of the Northern, Far Eastern, Baltic and Southern economic regions in the shipping of fish and fish products is large. The share of these regions of the total volume of fish and fish-product shipping by rail is 77 percent.

Although the volume of railroad fish freight shipment grew by 3 percent in 1983 versus the 1980 level, it is still below the level achieved in 1975. The growth of shipment distance of fresh-chilled and frozen fish, however, caused an increase of 483 km in average distance over the period from 1971 to 1983. A continuous reduction in the shipping of live fish by rail is observed in connection with its transfer to motor-vehicle transportation.

The North Caucasus, Southwest, Volga, Kazakhstan, Urals, West Siberian and Central Asian economic regions, which have a greater than 71 percent share of livestock shipping, make up a large proportion of the shipping of cattle, swine and other livestock. Principally slaughter cattle, along with pedigree cattle, are shipped to the Central, North Caucasus, Kazakhstan, Central Asian, Volga, East Siberian and West Siberian economic regions.

The shipment of cattle and swine decreased by more than half in 1983 compared to 1975. An analysis of the data shows that from 1965 to 1980 the proportion of railroad and water transportation in cattle delivery to the meat industry decreased from 25.2 to 8.2 percent, in swine from 26.4 to 5 percent, and in sheep from 32.4 to 10 percent. Cattle driving was reduced at the same time. This trend was basically preserved in the 11th Five-Year Plan. Pedigree cattle are shipped by rail over long distances along with slaughter cattle.

Inefficient shipments take place in the transport of animal-husbandry products by rail. An analysis of the data on freight shipment distribution by distance zone for April and October of 1983 showed that more than 13-15 percent of cattle, 43-50 percent of milk, 12-14 percent of butter and cheese, 10-12 percent of eggs, 9-10 percent of meat and subsidiary products and 12-13 percent of fish and fish products were delivered to distances of less than 200 km. In the majority of cases, these shipments are economically disadvantageous. Compared to average conditions, they reduce the daily runs of railcars by 3-3.5 times, which is substantially reflected in an increase in shipping cost.

Inefficient return product shipments are frequently tolerated. Thus in 1983, counter to the basic railroad shipping flow to Kazakhstan and Central Asia, 33,300 tons of meat products were shipped by railroad from the Kazakh SSR to the RSFSR, along with 2,800 tons to the Ukrainian SSR. These inefficient shipments also exist on other routes. The railroads are carrying out excessively long shipments of livestock products in still larger quantities. Thus, in 1983 more than 8 percent of milk was delivered to a distance greater than 500 km, along with 21-23 percent of butter and cheese, 30-37 percent of meat and subsidiary products and 21-24 percent of eggs to 2,000 km and more and approximately 9-15 percent of livestock to a distance of more than 3,000 km.

A reduction in such shipments has great economic significance. The elimination of slaughter-cattle shipment from Urals Oblast to the Tashkent Meat Combine by increasing the meat delivery to the Uzbek SSR, for example, made it possible to reduce transportation costs and expenses for feeding and support livestock en route by a total of more than 110,000 rubles a year.

According to MPS [Ministry of Railways] data, in 1983 74-77 percent of meat, animal fat and eggs were shipped in refrigerated trains and sections, 17-19 percent in automatic refrigerated cars (ARV), 2-3 percent in ice cars, and the rest (4-5 percent) in boxcars and other types of cars, and respectively 63-77 percent; 10.5-16.5 percent; 0.8-1.6 percent and 3-22 percent of fish. Specialized and other types of cars carried out 45-61 percent of poultry shipments by railroad.

The principal portion of meat, milk and fish freight is shipped in insulated rolling stock. More than two thirds of the fleet serving to ship animal fat, eggs and fish is refrigerated trains and sections. Single cars (ARV, ice cars and others), however, are insufficiently utilized for this freight. The predominant portion of processing industry enterprises cannot carry out simultaneous loading and unloading due to the insufficient length of sidings. This leads to an increase in car idle time in freight operations, a worsening of quality and freight spoilage, and an increase in transportation costs. At the same time, the shipment of live fish in single cars is uneconomical due to their low load level and large expenditures on their support. The three- and four-car refrigerated live-fish sections built in recent years have not yet found broad application. Not all shipments of cattle, swine and poultry are carried out in specialized cars.

The shortcomings noted in the organization of shipping livestock products and the inadequately perfected structure of the rolling-stock fleet have an effect on the quality and efficiency of transportation support for APZhK sectors.

Economic Indicators

An economic evaluation of the level and quality of APZhK transportation support is generated with the aid of cost and real indicators of shipments.

Cost indicators are the aggregated economic expenditures on freight transport, consisting of direct transportation costs (the expenditures of transportation organizations) and additional overhead costs, that is, the expenditures of shippers and recipients on sorting, packing, marking, thermal processing and storage of freight, as well as losses and spoiling of products and other expenses. In determining the shipping costs, an expense scale method was used and proportionate capital investments were excluded for operational optimal prices for rolling stock along with enlarged proportionate norms for the construction of railroad fixed structures.

Estimates have shown that with electric traction compared to diesel, current expenses on livestock product shipping are 10-14 percent less, and proportionate one-time expenditures are 4-6 percent less, where expenditures on the shipping of this freight are differentiated by train category and car types. Thus, the cost of shipping milk in railroad tank cars in the consist of passenger trains for a distance of 300 km totals an average of 10-12 kopecks per 10 ton-km, or 17-20 percent more than rapid freight trains, and 2-3 percent more than milk trains.

Current expenditures for the shipment of 1 ton of chilled beef in rapid freight trains for a distance of 2,000 km in ARVs are estimated to total an average of 41.8 rubles, in five-car refrigerated BMZ (5-RPS) sections 42.4, and in thermal railcars 12.6, while in the consist of special rapid route trains (frozen express) they are equal to 43, 44.2 and 13.8 rubles respectively. The proportionate capital investments in assimilating frozen beef shipments in frozen express trains are 20 percent less than rapid freight trains. This indicates the greater significance of the speed factor in operating high-cost types of rolling stock.

Estimates have shown that using post pallets increases car loading by 30-35 percent and reduces car idle time in freight operations. Pallets, however, increase the total tare mass of the car. As a result, the saving achieved in beginning and ending operations gradually loses its significance with a growth in shipping distance due to the additional expenditures on shipping the mass of pallets itself. At the same time, if the saving from the mechanization and acceleration of freight handling in refrigerated cars is taken into account, then the use of pallets, especially at distances of up to 1,000 km, reduces the total applied expenditures on meat transport by 9 percent, or by an estimated 11 rubles for 1 ton of meat.

It should be indicated that it is exceedingly economical to ship meat in a deep-freeze condition in thermal cars at distances up to 1,500 km. Thanks to the denser loading of meat carcasses in palletized form, the loss of cold is

reduced, the static load is increased by 3.0-3.5 times, and the shipping cost is reduced by 2.8-3.3 times. Additional expenditures arise in chilling the meat in rapid-freeze chambers and on the preparation and chilling of the indicated thermal cars at the loading points. Moreover, additional costs arise in delivering the freight in more rapid trains. These expenditures, however, are recovered to a considerable extent by savings in transport costs. With the utilization of thermal cars compared to shipping refrigerated carcasses in five-car refrigerated sections, the applied expenditures are reduced by 36 rubles per 1 ton of meat.

The current and one-time expenditures in meat transportation in a frozen state in the form of sorted cuts are reduced by 2-2.5 times. Moreover, the static car load increases by more than 3 times compared to shipping hung carcasses and the level of mechanization of the loading and unloading operations increases. Additional expenditures on tare, packing and chilling meat cuts is compensated for by savings in transportation costs and a reduction in freight losses. Overall, the total applied expenditures in this delivery method are cut in half, and by an estimated 57 rubles per 1 ton of meat.

The load level of specialized cars with larger cattle is a total of 8-8.5 tons, and 4.5-5 tons with smaller cattle. The cost of shipping is decreased by 20-25 percent when cattle are shipped in two tiers. The transportation costs of delivering cattle in specialized cars, however, are 45-50 percent higher than in boxcars. This difference in expenses is caused chiefly by the cost of the specialized cars and their frequent empty runs. At the same time, cattle lose less weight in these cars, since they have better feeding and watering conditions.

The shipment of live fish also requires large expenditures. A total of up to 8 tons of live fish can be shipped in a fish car. To preserve them, it is necessary to ship up to 24 tons of chilled water and 800 kilograms [kg] of ice, which greatly increases shipping cost. Moreover, the necessity of delivering them rapidly also requires an increase in transportation expenditures. Therefore, the cost of shipping of live fish in passenger trains at distances of up to 1,000 km reaches 47-50 kopecks per 10 ton-km, and 40-42 kopecks in frozen express trains. Expenditures are reduced by 4-5 times in the transport of chilled and frozen fish.

The shipping quality is evaluated by a system of real indicators that are characterized first and foremost by economy, timeliness, regularity and dependability of freight delivery, as well as its preservation while fully satisfying APZhK requirements for shipping and the rational utilization of the transportation equipment. An increase in the level of shipping economy can be achieved by the realization of a set of measures on reducing transportation costs based on improving the organization of the shipping process. The timeliness of shipments is ensured by implementing measures to accelerate its delivery. Analysis shows that the delivery time of products at distances of up to 100 km by rail is an average of 30-35 hours, while for motor vehicles it is approximately 4-5 hours.

Here is an example from railroad operational practice: in February 1983, at an average shipping distance for poultry by rail to the designated station of 1,092 km, the average delivery duration was 4.1 days, that is, it was within the bounds of the norms, even though in fact the delivery speed was 268 km per day versus 463 km according to standard. The situation improved considerably in September--the actual delivery speed was 359 km per day versus 287 according to standard, and the delivery speed of milk and dairy products, eggs and fish improved somewhat. The actual delivery speed of meat and meat products, however, declined from 312 km per day in February to 248 (where the standard is 322) in September. Therefore, to our view, it is necessary to improve substantially the operative system of time and delivery-speed norms.

Additional applied expenditures, caused by the increase of freight mass at enterprises and the variations in productive stocks due to the non-fulfillment of delivery times and irregular freight arrival, are relatively small. The untimely delivery of raw materials, however, influences to a considerable extent the quality, assortment and supply times of finished products.

Estimates showed that in shipping livestock products in frozen express trains, in spite of the increase in shipping cost of an average of up to 5-8 percent compared to ordinary freight trains, freight losses are reduced by 10-12 percent, freight-mass cost by 30-45 percent, and total applied expenditures overall by 5-7 percent. These data demonstrate the great economic efficiency of forming and circulating rapid route trains for delivering perishable freight on fixed routes.

The preservation of freight in transport is an important indicator of the quality of APZhK transportation support. It is therefore very important to select correctly the mode and type of transport for delivering animal-husbandry products with the least loss. Estimates show that in the delivery of milk in rail tank cars in the consist of milk trains, losses are 15 percent less than in rapid freight trains and 35 percent less than passenger trains. The direct motor-vehicle version of delivery makes it possible to reduce losses by 1.8-2.2 times compared to railroads. In shipping dairy products in ice cars, an average of 4-6 percent greater spoilage and waste is observed than in refrigerated rolling stock, and 60-65 percent less than in automatic refrigerated cars.

The size of meat product loss basically determines the methods of cooling, freezing, storage and transport. The reduction in meat loss is substantial when it is shipped in deep-freeze condition in sorted cuts packaged in plastic film, and in frozen form, which determines its high transportability. In delivering frozen meat in automatic refrigerated cars, 55-70 percent less loss is noted than in five-car refrigerated sections.

It is most efficient to ship fish in a chilled or frozen state. The shipment of fish in live-fish trucks, however, reduces losses by 2.0-2.8 times compared to delivery in live-fish railcars in the consist of passenger trains operating at great distances.

It must be noted that large labor expenditures are connected with the shipment of animal-husbandry products. It has been established that the labor

expenditures on beginning and ending operations in railroad transportation are 2-5 times greater than for motor vehicles. This is connected with the protracted accumulation of freight and cars at loading and unloading stations and the forming up and breaking down of consists.

Moreover, high material consumption is associated with the transport of these products (the materials consumption for shipping the majority of animal-husbandry products by rail is 3-5 times greater than bulk freight in universal-type cars), along with high energy consumption (for example, in transporting frozen meat it is 8-9 times greater than the shipping of bulk freight). Energy expenditures in delivering freight by passenger trains are 10-11 percent more than for freight trains, and exceed frozen express trains and milk trains by 22-24 percent. The energy consumption of shipping animal-husbandry products by average-capacity motor vehicles is 8-9 times greater on the average than rail transport by diesel locomotive, and 4-7 times greater for large- and extra-large-capacity motor vehicles.

Optimal Spheres of Application

Research on the economic indicators of shipping animal-husbandry products by various forms of transport and the juxtaposition of total applied expenditures made it possible to determine those of them that are efficient.

A comparison of various shipping schemes by applied expenditures showed that the use of small- and medium-cargo-capacity motor vehicles is expedient in the direct motor-transport variant at distances of up to 80-90 km, and that the use of trailers considerably expands the sphere of application of motor-vehicle transport. The direct shipment of milk from the major milk complexes by large-capacity motor vehicles (MAZ-500A, KamAZ-53212) was efficient at distances of up to 90-110 km, and extra-large-capacity tractor trailers at up to 200 km. It is expedient to utilize railroad transportation for the delivery of a large volume of milk at comparatively great distances. Estimates demonstrated the high efficiency of shipping milk in the consists of passenger and milk trains circulating in the supply zones of the enterprises of major cities and industrial centers with a high density of product procurement.

It is expedient to ship animal fats by ZIL-130 medium-capacity trucks for distances of up to 70-80 km, and by KamAZ-5410 and "Shkoda" trucks with refrigerated semitrailers at a distance of 90-115 km. The use of MAZ-6422 tractor-trailers with refrigerated semitrailers of 20 tons cargo capacity expands the area of efficient utilization of motor-vehicle transport to 140 km. The shipment of animal fat and cheese at great distances by rail in five-car refrigerated sections is more efficient than in ARVs. The sphere of application of motor transport in the shipment of sour cream, cottage cheese and other dairy products is significantly broader than in the shipment of butter and cheese.

It is more efficient to ship chilled meat by medium-capacity automatic refrigerated trucks at distances of up to 220 km or up to 300-400 km by large- or extra-large-capacity tractor-trailers rather than by rail, since that leads to a reduction in total applied expenditures. In the railroad shipping of

hung frozen carcasses the size of transportation expenditures is especially great, caused by the low level of car loading and their protracted standing in loading operations. In the transportation of meat in a deep-freeze state, the areas of application of motor transport are somewhat narrower than in the delivery of carcasses.

In the shipping of frozen meat, the total applied expenditures are roughly 3 times less than for chilled. Therefore, in the delivery of frozen meat the most rational sphere of application of motor transport is at distances of up to 100-160 km. The use of ice cars is efficient in the middle and northern regions of the country, where cheap ice is produced by freezing in natural conditions. The most economical equipment for transporting meat is thermal railcars. The applied expenditures on shipping in these cars are 1.4 times less than delivery in five-car refrigerated sections, and 1.5 times less than ice cars.

Total expenditures on the delivery of meat products by medium-capacity motor vehicle at distances of up to 120 km, and by large- and extra-large-capacity tractor-trailers at up to 170-330 km, are not large compared to rail transport. In shipping meat products by rail, five-car refrigerated sections are less efficient, since their loading level is low and the delays in loading operations are protracted. In this regard, the ARV is advantageously distinguished from other types of refrigerated rolling stock. Despite the relatively high level of capital investment, applied expenditures on meat-products shipping by ARV are 15-18 percent less than five-car sections.

The majority of the country's poultry farms and combines are located near major cities, which creates the preconditions for the broad utilization of motor transport in shipping meat, poultry and eggs. Loading indicators and delivery speeds in motor-transport shipping are relatively high, and losses, for example of chilled poultry, are half as much as those of railroads. The rational spheres of application of medium-capacity automated refrigerator trucks reach 110-120 km for delivering eggs and 275-350 km for killed poultry, and 130-140 and 350-450 km respectively for large- and extra-large-capacity refrigerated trucks. The utilization of railroad transportation can only be justified in long-range interregional shipments.

The rational spheres of application of the currently operating GAZ-53A live-fish trucks are at distances of up to 180-200 km. The use of large- and extra-large-capacity trucks expands the sphere of application of motor transport to 450-500 km. In railroad shipping of live fish, large expenditures are required on the construction of railroad sidings to reservoirs and the development and upkeep of trapping facilities for holding and accumulating fish and escorting freight.

The total applied expenditures on shipping frozen and chilled fish are considerably lower than for live fish. The zone of motor-transport utilization is limited in this. Thus, medium-capacity trucks are only efficient at distances of up to 40-45 km, and large- and extra-large-capacity ones at up to 60-80 km. In this case, railroad transportation is distinguished by a broader radius of utilization. The transportation of fish

products in large batches from distant ocean basins, seas and other reservoirs is more efficient in refrigerated sections and trains.

The economically expedient spheres of application of motor transport in livestock shipping are considerably broader than those of railroads. Delivery by railroad requires large expenditures on supporting, feeding and watering the livestock. Moreover, expenditures for trucking livestock to the departure stations and away from end stations to the actual recipient are large. Estimates show that the total applied expenditures on shipping larger cattle in OdAZ-857 cattle semitrailers with a KAZ-608V (6-ton capacity) at distances of up to 160-190 km, and smaller cattle up to 220-300 km, are lower than for railroads. The sphere of application of large- and extra-large-capacity tractor-trailers reaches 300-450 km. It is necessary to note that at great distances it is most efficient to ship livestock in two-tiered cattle cars on rapid routes. The level of car loading of pedigree cattle is less than that of slaughter cattle. Moreover, expenditures on feeding pedigree cattle and serving them en route are considerably higher. As a result, the total applied expenditures on shipping pedigree cattle are on the average 28-35 percent greater than for transporting slaughter cattle.

The utilization of air transportation for shipping livestock is economically unjustified at short and medium distances. The total transportation expenditures for livestock air shipments at 2,000 km are 2.6-2.8 times greater than by rail. It should be noted nonetheless that compared to the railroad variant, the shipment of livestock by air at distances of up to 2,000 km reduces livestock weight loss by 15-17 times, and by 20-25 times at up to 3,000 km, thanks to the high speed of flight. In this regard, it seems expedient to implement the long-range shipment of pedigree cattle from the western regions of the country to the eastern (at distances greater than 3,000 km) by specialized An-12 and Il-76 air livestock carriers. For the shipment of calves, piglets, sheep and goats at distances of 400-3,000 km, it is economically expedient to create large- and expanded-capacity two-tiered cattle cars with improved livestock feeding and watering conditions.

The rational distribution of animal-husbandry product shipping among the types of transportation is insufficiently assisted by the operative tariffs for freight shipments. A comparison of tariff charges for various versions of transport shows that the application of motor transport is expedient only at distances of up to 70-110 km, and at distances of 110-140 km taking into account freight losses in shipment. This corresponds to the optimal spheres of application of the various forms of transportation cited above in the shipment of the freight reviewed.

Estimates have shown that the output-to-capital ratio of animal-husbandry product shipping is considerably higher than the level of that indicator in the shipping of bulk freight in universal-type rolling stock. Thus, the output-to-capital ratio of shipping chilled beef in insulated cars is roughly 8-9 times lower, and 9-10 times lower for live fish, than the delivery of canned dairy products in boxcars. The output-to-capital ratio for motor-vehicle shipments of animal-husbandry products is on the average 20-25 percent higher than for railroads, and 23-44 percent lower for the shipment of livestock. The absolute value of productive funds expenditure in motor

transport is 10-15 percent less, while for railroad transportation it is on the average 5-8 times higher than the shipping cost.

The profitability of shipping most animal-husbandry products by rail is low and the delivery of meat, fish and cattle are basically unprofitable, while a significant portion of animal-husbandry products shipments in motor transport are also unprofitable. For a fuller reflection of shipping cost, the minimum size of railroad tariffs should be established at a 50-60 percent profit level with relation to shipping cost, and a little lower for products with a higher shipping cost (31 percent for live fish, 45 percent for chilled meat). The minimum tariff size for motor-vehicle shipping should be established at a profit level of 37 percent with relation to cost.

Planning and the Management Mechanism

Measures for increasing the efficiency of APZhK transportation support envisage the improvement of management in all types of transport and planning, the rationalization of shipping in the areas of production and circulation, the improvement of the technologies of product storage, handling and packaging, the design of transportation equipment and the forms and methods of transportation operations, the assiduous utilization of material, labor and financial resources in product transportation, an increase in product preservation in shipping etc.

To improve APZhK transportation support, it is expedient to develop and incorporate, within the framework of the USSR Food Program, a directed integrated sub-program for the development of the production and sale of animal-husbandry products in all regions.

To improve the scientific level of shipping plan development, territorial transportation and economic balances (TEB) should be more broadly utilized, the composition of which makes it possible to coordinate and balance the plan indicators of production, demand and product shipping by source (item) of formation, more fully evaluate the growth factors of shipping operations and determine their distribution among the types of transportation. TEBs should become a basis for developing optimal traffic-flow schemes for the most important products of animal husbandry.

The resolution of the tasks of optimizing the shipping of various animal-husbandry products in the Central Asian region showed that the optimal shipping plan version for meat, butter, cheese, eggs, livestock and fish by rail makes it possible to reduce transportation expenses by up to 14 percent. Estimates showed that the composition of the optimal traffic-flow schemes was efficient in intra- and inter-oblast product shipping. Overall, the incorporation of optimal shipping schemes for animal-husbandry materials and processed finished products on a national scale would produce an enormous economic saving. It is therefore expedient to elaborate and periodically review the zones of product supply and sales of industry enterprises.

A major potential area for reducing transportation costs is the reduction and elimination of irrational shipments. Irrational shipments on certain types of

transport can be reduced by redistributing them. Thus, by transferring a significant portion of short-run railroad shipments of animal-husbandry products to motor transport (with, naturally, a corresponding strengthening of its material and technical base), it is possible to reduce product losses and economic costs by a total of more than 18 million rubles a year. The transfer of railroad pedigree-cattle shipments to air transportation from the western parts of the country to the Central Asian republics and other eastern regions of the country will make it possible to reduce total applied expenditures by more than 260,000 rubles a year, including by 95,000 rubles a year in the Uzbek SSR.

Superfluous long-range shipments of many animal-husbandry products to less well-provided-for regions can be reduced considerably if local production of these products is increased. It is economically more expedient to deliver more transportable finished products and articles, as well as semimanufactures, in place of the inefficient long-range shipping of poorly transportable raw materials.

To our view, it would be expedient to allocate an independent "Animal-Husbandry Products" aggregate group in the operative tariff and statistical freight list for the improvement of current and future planning of animal-husbandry products shipping.

To improve the administration of animal-husbandry products shipping and the coordination of the activity of transportation ministries and departments and the management organs of the agro-industrial complex, it would be expedient to create in the Ministry of Railways and the motor-transport ministries of the union republics appropriate functional administrations or departments, and in the railroads, departments or groups, for planning and organizing the shipment of agricultural products and other freight of the agro-industrial complex. This system of organizing the administration of shipments will permit the more efficient operation of refrigerated transport within the framework of the transportation system and the economic agro-industrial complex of the country.

To improve the economic interaction between all forms of transportation and with the Spheres of the APZhK in planning and evaluating the activity of transportation enterprises, the full and timely fulfillment of contractual obligations of freight shipment in the stipulated product mix on time, guaranteeing the supply of raw materials to industrial enterprises and of finished products to trade organizations, should be taken into account. Moreover, a system of planning and calculating economic standards and indicators should be introduced that reflects the completeness, quality and efficiency of APZhK transportation support. Ministries and departments that are planning the shipment of animal-husbandry products should establish targets for the reduction of transportation expenditures.

To strengthen the role of tariffs in raising shipping efficiency, it is necessary to stipulate a growth in the level of the operative tariffs for shipping chilled meat and fish, butter and cheese, dairy and meat products, live fish and livestock by rail and truck transport.

An evaluation of losses should be conducted according to the actual expenses for the production and sale of products taking into account the time factor needed for product reproduction. To strengthen the material interest of employees in reducing product losses in storage and transport, a portion of the funds saved as a result of improvements in product preservation can be directed toward providing incentives for them.

The resolution of the issues reviewed in improving transportation support for the APZhK will make it possible to realize successfully the USSR Provisions Program.

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[Article by Southern Railroad Belgorod Division Chief I. P. Khristovoy, Belgorod: "Toward the 27th CPSU Congress: Transportation Support for the Agro-Industrial Complex"]

[Text] The realization of the USSR Food Program is a nationwide cause. Railroad transportation is an important link in supplying the agro-industrial complex with all that is necessary and in delivering agricultural production to consumers. Great and difficult tasks stand before the railroad industry workers: the full and timely shipment of all agricultural freight while providing for its rapid movement and its preservation en route along with the clear organization of shipment formulation.

In resolving them, the collective of the Belgorod Division of the Southern Railroad, in conjunction with the workers of the agro-industrial complex of Belgorod Oblast, has achieved good results. A harmonious system of measures is developed and in operation that ensures reliable transportation support for agriculture. An inter-kolkhoz association--a rayon transportation shop--was created in Shebekinskiy Rayon for the fuller satisfaction of transportation requirements. Such transportation shops are being organized in many other rayons served by our railroad.

The experience of the integrated utilization of transportation equipment in the resolution of the USSR Food Program by the railroad and agricultural workers of Shebekinskiy Rayon was presented to the USSR VDNKh [Exhibition of the Achievements of the National Economy]. Proceeding from a community of interests, the transportation workers are strengthening the material base and are perfecting the legal and contractual bases of interaction under the guidance of the oblast party organization.

A Model Transportation Operations Rayon

The railroad workers of the division, along with the workers of agriculture, are constantly working on improving transportation support for towns. The organization of loading and unloading and information on freight arrival are being improved at the stations, and the mechanization equipment of loading and unloading operations is being organized on a cooperative basis.

These issues are being resolved most actively, creatively and efficiently in the Shebekinskiy Rayon of Belgorod Oblast. Here are located kolkhozes, sovkhoses and poultry farms, and in the city of Shebekino--industrial enterprises connected with agriculture, a cement-products plant, a major storage elevator, Goskomselkhoztekhnika [State Committee for Supply of Production Equipment for Agriculture] and Soyuzselkhozkhimiya [All-Union Agricultural Chemical] bases and others. The transportation needs of the rayon are served by the Shebekino and Nezhegol stations.

Several years ago, the people of Shebekino broadly developed industrial and agricultural enterprise competition to improve railcar utilization under the slogan "We are making our rayon a model transportation operations rayon!" Division managers and engineering and technical employees, in conjunction with the administrations of enterprises and the employees of the city party committee, deeply analyzed the presence and conformity to volume of operations in the areas of unloading, mechanization equipment and the technology and organization of operations at all rayon enterprises, and planned the way to strengthen the mechanization of loading and unloading operations and improve the organization of labor. To assist the enterprises in teaching their employees the rules of shipping and loading and unloading operations, the railroad workers allocated qualified specialists who also monitored the fulfillment of the projected measures. Temporary transportation inspectors of the city party committee also participated in this work.

A united technical council was created in Shebekino to resolve transportation problems, made up of railroad workers of both stations and specialists of industry enterprises. The Shebekino station chief headed up the technical council. In the future, this organ will be transformed into a rayon technical council whose work will be led by the chairman of the rayispolkom. Specialists of the railroad stations and enterprises of the agro-industrial complex also joined it. The transportation shops of industrial enterprises in Shebekino Rayon were strengthened, unified work shifts for these shops and stations were created, the loading and unloading machinery and mechanisms were organized on a cooperative basis, the consolidated loading of railcars was organized, and teams were formed to unload freight at night that operated on a volunteer basis.

A number of innovations were carried out in incorporating a new system of material and technical support for agricultural enterprises. Currently all sowing and harvesting equipment is handled by rayon divisions of Goskomselkhoztekhnika, fertilizer by Soyuzselkhozkhimiya, building materials for sale to the populace by wood-products warehouses, and coal by rayon fuel organizations. Modern mechanized bases and areas were constructed for them.

The kolkhozes are carrying out considerable amounts of construction of productive structures, social and cultural facilities and roads with their own manpower. Materials for this are prepared, as a rule, in a decentralized manner and are delivered directly to the consumers. The organization of the unloading and delivery of this freight creates serious difficulties for both the kolkhoz workers and the railroad employees. After all, the manager of a farm, having received notification from the station of the arrival of freight, does not always have the opportunity to allocate the necessary equipment,

workers and transport for its unloading and removal. Frequently the freight is unloaded only on the next day, and its removal postponed for an indefinite period--to the end of the grain harvest or the corn siloing, sowing etc. Insofar as the freight for kolkhozes arrives erratically, there are no special teams here for their unloading and removal. Workers are taken from other sections.

During the sowing and harvesting campaigns, corn siloing and when the roads were impassible the kolkhozes removed the freight to temporary storage areas that were located near the railroad stations. Watchmen were kept at the areas, along with a kolkhoz representative in the town near the station for crediting shipping documents and resolving all other issues associated with shipments. All of this was considerably increasing transportation expenses and required non-productive expenditures for the labor of many employees. Cars were idle for more than the standard time and the delivery of freight was delayed.

There were many difficulties for the railroad workers as well with such an organization of the kolkhoz transportation support. The support station serves up to 20 kolkhozes and it was difficult to notify them in advance of the arrival of cars. Due to the untimely removal of freight to the kolkhozes and the necessity of storing it separately at the station for every recipient, there was a constant shortage of places for freight unloading, and maneuvering work in arranging cars was made more difficult. And, by the way, practice showed that many kolkhoz representatives, as a rule, knew the Railroad Charter and the rules for freight shipping very poorly. This made the work of the dispatchers and trade-office agents considerably more difficult.

That is why the Shebekinskiy Rayon Technical Council, to improve town transportation support, reduce car idle time and speed up freight removal from the stations, proposed the creation of a specialized organization that would liberate the kolkhozes from concerns associated with freight shipping, represent their interests in interaction with the railroad, accept arriving cargo, produce shipping accounts and provide for the unloading, storage and delivery of freight from the station to all the kolkhozes of the rayon. It was decided that this organization would be of an inter-kolkhoz nature and it was created by means of shares from kolkhozes and equipment allocated by them.

The new organization was named an inter-kolkhoz loading bureau. Its charter was developed and approved at the ispolkom. A bank account was opened and a location was chosen for the construction of a base.

Design documentation for the construction of a siding was formulated in the division. The railroad workers laid a connecting spur, and the kolkhozes constructed shops, a garage, an electric power station, an administrative building and other facilities using their own resources. A high platform, a loading area, and a joining shop were constructed on the base of the inter-kolkhoz loading bureau. Using kolkhoz funds, a motor-vehicle, tractor, timber-truck and crane pool was created. The inter-kolkhoz bureau fully liberated the kolkhozes from unloading and shipping freight arriving for them, and carries out these operations with its own manpower and equipment.

Along with this, rayon kolkhozes organized a timber-preparation section using their own manpower in Irkutsk Oblast on territory granted. There shops, a boiler room, a power-saw bench and a railroad spur were built. This facility was also made subordinate to the inter-kolkhoz loading bureau. In this way, the preparation of wood for kolkhozes and its shipment, unloading, partial reworking in the shops and delivery to the kolkhozes was transferred to the loading bureau, which received the name of Mezhkolkhozselprom [Inter-Kolkhoz Agricultural Industry] Rayon Association.

The new association became an independent profit-and-loss accounting enterprise subordinate to the rayispolkom and the oblast's Oblmezhkolkhozselprom [Oblast Inter-Kolkhoz Agricultural Industry] Association.

The Efficiency of the New Organization

Based on the Shebekino experience, Mezhkolkhozselprom [Inter-Kolkhoz Agricultural Industry] rayon associations were created in 14 rayons of the oblast. Their activity is governed by a special Statute and Charter. The principal task of the associations is the unloading and delivery of freight that arrives at the stations for kolkhozes. Along with this, they collect scrap metal from the kolkhozes and deliver to the stations, organize the issuance of various products to local businesses, and deliver them to the stations and load them into cars (school chalk, ground chalk and others).

The creative activity of the workers grew in unloading freight and delivering it to the town. By way of example, it takes 1.5-2 hours to unload a timber truck at the kolkhozes. At the suggestion of mechanic O. K. Khotsepovich and tractor driver V. P. Miroshnichenko, the timber trucks were equipped with a hydraulic apparatus connected to the tractor. This made it possible to unload them automatically in 5-10 minutes. As a result, wood delivery expenditures were reduced by five times.

The associations became rayon transportation shops for the town. Their creation made it possible to accelerate unloading sharply. Cars with freight for the kolkhozes had earlier stood for days, and now they are unloaded on the average in 2.2 hours, while the standard is 2.5 hours.

The procedure for financing the activity of the association and charges for services rendered were clearly determined. The association's own funds are formed by a share contribution of the kolkhozes, which contribute them according to the formula of 1 ruble per 1 hectare of cultivated land or by transferring buildings, structures, equipment, machinery or other property to the association. Moreover, according to the results of the activity at the kolkhozes of private plots and trades, the association receives 0.5 percent of their total realized production.

Funds were established for the association: state and amortization funds along with funds for strengthening and expanding the farm, as well as for material incentives and social and cultural functions. All association charges to the kolkhozes, suppliers and other organizations are implemented in

accordance with established procedure for state and cooperative enterprises through Gosbank. Any surplus after payments to the funds is distributed among the kolkhozes in proportion to their share contributions.

Charges to the kolkhozes for loading operations, as well as for the transport of freight, are generated according to the prices established for agricultural organizations, and for other services rendered and the products of private plots, with all buyers according to prices determined by negotiation. The labor of tractor operators occupied in transportation operations is compensated according to a piece-plus-bonus system in accordance with established norms for output that are developed using the standard norms approved by the USSR Ministry of Agriculture and coordinated with the central committee of the industry trade union.

In Shebekinskiy Rayon, as in all of Belgorod Oblast, much construction is underway on hard-surfaced roads. A great quantity of road ballast arrives for the construction organizations. This made it necessary to concentrate the unloading and removal of this freight in one place. At the suggestion of the rayon technical council, a raised track for unloading ballast was located alongside the Mezhkolkhozselprom siding. They made possible the broad-scale cooperative utilization of the machinery. Thus, the builders unload ballast not only for themselves, but for the kolkhozes as well and load it with their own machinery into Mezhkolkhozselprom trucks. At the kolkhozes, these vehicles are unloaded and reloaded with scrap metal that is transported to the Mezhkolkhozselprom area. The construction section also assists in the unloading of coal with their own machinery. Moreover, to accelerate the freight operations, ring consists with ballast are unloaded simultaneously in the areas of all construction organizations without regard to freight ownership.

The cooperation of the machinery and the freight areas made it possible to improve the regulation of freight unloading. After all, for every car that has arrived, after the arrival of information from the trade office on the nature of the freight and the recipient, it is necessary to answer the question of where to unload the freight, taking into account the state of the freight area and the availability of machinery. Earlier, representatives of the receiving organization were summoned for this and before their arrival the cars were not sent for unloading. Great difficulties arose at enterprises as well in providing for the timely receipt of information from the divisional information center on the expected arrival of freight. Moreover, on the sidings of every recipient were one or two railheads and switches that were on the balance sheet of the enterprise, and overall up to eight in a cluster. In bringing up and sorting cars, maneuvers are required and switches must be shifted, but to maintain a switch-control post at every enterprise is unprofitable.

That is why the Shebekino workers decided to create a united dispatching post on a proportionate basis. All of the construction organization-recipients were allocated one dispatcher. A total of 5 men, one of which was senior. The dispatchers worked around the clock in concert in a unified shift with the Shebekino Station. An operational location was equipped for them at the neck

of the branching railheads. A direct telephone link with the station duty officer was installed at each work station.

The dispatchers at the unified post would receive information on the arrival of cars, prepare in good time machinery locations for their unloading, and summon workers for nighttime. They shifted the switches for maneuvering, assigned cars, monitored the degree of completion of unloading, and conducted an accounting of idle time. The organization of the dispatcher post made it possible to reduce car idle time on sidings by 1.5 hours and provided for their unloading at any time of day, insofar as information about car arrivals made it possible to prepare for it in advance.

Using the experience accumulated last year, Soyuzselkhozkhimiya sidings were built alongside the lines of the inter-kolkhoz association with a total length of 3 kilometers along with mechanized warehouses for storing mineral fertilizers. Equipment was obtained for delivering it to the kolkhozes. The Soyuzselkhozkhimiya Association has now taken upon itself the functions of a unified dispatcher post that supports all of the enterprises of the agro-industrial complex of the rayon.

Improving Shipping

In accordance with the new system of transportation support, improved technology for planning car arrival for the loading of vegetables, fruits, potatoes, eggs and other agricultural produce was developed in the division. It takes into account the organizational characteristics of dispatching and shipping this freight. Their shippers, as a rule, are sovkhoses and the rayon divisions of consumer cooperatives that remove the produce from the fields and deliver it to the station with its subsequent loading according to the direct "truck--railcar" variant.

They transport the produce from the fields to the stations from distances of 40 kilometers and more. Here it is impossible to tolerate the idle time of dozens of trucks awaiting the arrival of railcars or of railcars due to the untimely delivery of produce. For this it is necessary that the agricultural workers know on the day before loading how many cars will come in and when. Then the transportation and workers can be distributed in such a way that by the time the car comes in to the station, the trucks have already arrived with the produce and the loading time does not exceed standard times. If the motor transport is insufficient, then the freight can, with the coordination of the station chief, be expediently taken and stored in an area where a car will come in. The loading time will not exceed standard times, and the motor transport will even be used efficiently.

Proceeding from this, a clear procedure was developed and introduced in the division for planning the provision of rolling stock for shippers of agricultural freight. The station chiefs elaborate daily with the shippers the possibility of agricultural produce shipments according to the demand for shipping in the following days and transmit the information to the division operator by 12:00. The section train dispatcher informs the duty officers of all section stations at 6:00, regardless of whether the stations receive preliminary information on the arrival of freight for unloading, of the exact

time of arrival of the cars with an indication of the type of rolling stock, a description of the freight and the recipient 4-6 hours ahead of time.

The chiefs and other management employees of the stations, possessing this information, elaborate by 7:00 the possibility of each recipient unloading the cars that have arrived and are expected to resolve all issues associated with this. From 7:30 to 8:30, the deputy traffic department chief for freight operations receives reports from the station chiefs on expected operations in the upcoming days.

Using these reports elaborated by shippers' requests and data on the arrival of empty cars at divisional junction points and the expected quantity of prepared cars as well as regulated targets, he composes a plan for providing empty cars for loading requests at each station for the upcoming days. Requests for the loading of agricultural freight are taken into account first and foremost in this.

After a review of the plan by division managers, it is transmitted to the workers of the dispatching apparatus for execution. The train dispatchers report to each station data on what cars, from where and with what freight they will receive as well as what empty cars, for what freight, where and with what freight should be dispatched. The station chiefs inform the shippers about the planned supply of empty cars in the upcoming days. This makes possible the clear organization of operations, the efficient utilization of transport, the implementation of shipments with minimal expenditures and the acceleration of car handling. By way of example, in 1984 car idle time for one freight operation in the division was reduced by 0.7 hours compared to the target and was improved by 2.3 hours versus the 1983 level.

The new technology of organizing agricultural freight loading has made possible the steady fulfillment of the shipping plans. Last year the shipping plan for all agricultural freight was fulfilled by 102.7 percent. Moreover, more than 21,600 additional tons of grain were shipped along with 10,000 tons of flour, 14,000 tons of balanced fodder and 27,200 tons of vegetables.

Much work is being conducted by the workers of the division and the agro-industrial complex on improving the utilization of railcar freight and volume capacity. Rolling stock is being selected efficiently with this aim that is given over to various freight mixes, and progressive standards of car freight loading are being developed and incorporated for which net standards are not established, and the number of open cars is increasing, especially in the shipping of sugar beets on ring routes etc. The static load of a railcar last year exceeded the target by 670 kilograms due to this, and more than 6,600 cars were freed up for additional economic freight loadings. The weight of cars carrying mineral fertilizer was increased by 410 kilograms compared to the target, sugar by 2,080 kilograms, grains by 1,320 kilograms and balanced fodder by 1,110 kilograms.

Our division concludes labor cooperation contracts each year with the Soyuzselkhozkhimiya and Goskomselkhoztekhnika oblast associations, enterprises of the meat, dairy and food industries and other enterprises of the agro-industrial complex of Belgorod, Kursk and Kharkov oblasts. The creative

competition of related transport workers on the basis of contracts produces good results. Last year, car idle time on enterprise and organization sidings was reduced by 0.76 hours compared to 1980. This made it possible to free up more than 22,000 cars for additional economic freight loadings. The reduction in car idle times on sidings was achieved by the development of transportation shops. The oblast's Soyuzselkhozkhimiya Association carried out a particularly large amount of work. Mechanized complexes with railroad sidings and hangar-type warehouses were built at all key stations serving the rayons and cities.

The great mutual obligations directed toward reducing idle time in freight operations, increasing the static load of railcars and fulfilling the shipment plan were adopted for the concluding year of the five-year plan.

In meeting the 27th CPSU Congress and following the course planned by the party for improving the agro-industrial complex, which was creatively developed in depth in the resolutions of the October (1984) and April (1985) plenums of the CPSU Central Committee, the railroad workers of the Belgorod Division are improving transportation support for agricultural enterprises and increasing the shipment of freight for the agro-industrial complex.

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RAIL SYSTEMS

TEP-70 LOCOMOTIVE COST OVERRUNS INVESTIGATED

Moscow LENINSKOYE ZNAMYA in Russian 11 Aug 85 p 2

[Article by LENINSKOYE ZNAMYA correspondent A. Shabashkevich, Kolomna--Moscow:
"Economic Potential and Return: How Much is a Diesel Locomotive These Days?"]

[Text] The Ministry of Railways [MPS] recently obtained a new TEP-70 diesel locomotive manufactured by the Kolomna Plant Association.

"Are you satisfied with the purchase?" I asked V. P. Kondratyev, the deputy manager of the new diesel locomotive department of MPS.

"It's a good vehicle..."

"But you paid almost three hundred thousand rubles too much for it. The projected cost of a TEP-70 is 407,000, but MPS now forks out 697,000 for each diesel locomotive."

"What can you do," answered V. P. Kondratyev calmly, "passenger diesel locomotives are produced just in Kolomna. We waited fifteen years for the TEP-70. The locomotive fleets of our mainlines are not bursting with abundance. More than a hundred passenger locomotives are needed to satisfy their requirements. Now they have to replace them with freight locomotives. This costs the national economy. The capabilities of the new locomotive would reduce the proportionate labor intensiveness of maintenance and increase passenger turnover. The economic saving from the operation of one TEP-70 would be 293,000 rubles a year. But today, instead of hundreds of new vehicles we receive them one by one. We take what they give us without arguing."

Why is the diesel locomotive so expensive?

A little more than 13,000 man-hours should be expended on the production of the TEP-70 by the Kolomna Plant Association, but 46,253 man-hours are spent. This is without regard to the labor intensiveness of the diesel, which also exceeds the projected amount. The high labor intensiveness of the new model determines its high price. These numbers were recently mentioned in a report of the minister of heavy and transportation machine building at a meeting of the ministry active membership.

"We estimate reaching the projected labor intensiveness of the TEP-70 by 1990," says V. A. Berezhkov, the association's deputy chief engineer for production preparation.

"So the minister was hasty in criticizing the association?"

"Our example is a lesson to others," said V. A. Berezhkov, avoiding a direct answer.

The level of progressiveness of a technological model depends on the time expended on its assimilation. Fifteen years have passed since the moment the TEP-70 design solution appeared. Nonetheless, specialists today affirm that the technological level of the new vehicle does not lag the best models of diesel locomotive construction. Honor and praise to the plant designers who imparted such vitality and ability to compete to their offspring. The plant collective received an award for the development of this diesel locomotive.

Virtue is only useful, however, when it is turned into deed. Today, only twenty TEP-70s of the fifty making up the test series have been manufactured.

"This locomotive will bear an experimental designation until 1990 at least," affirms V. A. Berezhkov.

Just how much can one experiment? Not one document gives an answer to this question. No completion date is named in the order of P. N. Gerasimenko, the deputy chief of Soyuzdizelmash [All-Union Diesel Machine-Building Plant], on the beginning of test series manufacture. Only massive and fully-tooled production will allow the labor intensiveness, cost and market value of the model to be brought into accordance with the projected values.

"Quite true," agreed V. P. Volodin, the chief process engineer of locomotive building. "The rate of labor intensiveness reduction for the TEP-70 can't outstrip the reconstruction. After all, to produce this diesel locomotive we had to create new technology and build a new shop."

Fair enough. You can't outstrip reconstruction, even if it moves at a snail's pace. At some facilities, they are two years behind the plan. But judging by the documents, the productive capacity for TEP-70 output is basically already in operation. Four lines of the new metallurgical press shop are already in operation. Nonetheless, the labor intensiveness of the locomotive and its production cost are far from the projected reference points. Not one document, including the reconstruction plan, links these stages with labor intensiveness and the production cost for which production is being prepared. Thus, no one knows what they should be today. It would seem that such a link is suggested by logic. But even that, however, is violated in our case.

According to the documents, the basic capacity for mechanical parts machining for the TEP-70 is finished and assimilated. But just 122 of the 3,500 constituent parts of the diesel locomotive are manufactured in the new production. All of the rest "undergo" the old process and drag along all the costs of production poorly adapted to the new-model locomotive.

I visited the new wing of the plant with V. P. Volodin. Half-empty accommodations were revealed. Of 102 mechanical parts machining units, only 47 were installed. The execution schedule of capital-investment assimilation for plant reconstruction and the introduction of metallurgical-press shop capacity are equal. It is as if everything has been assimilated, everything needed has been introduced.

The minister's order "Raising the Technical Level of Diesel Locomotive Production" opens the curtain a little. One of its chapters was devoted to "completing the equipping and assimilation of productive capacity for TEP-70 output in the metallurgical press wing."

"The fact is," explains Soyuzdizelmash Deputy Chief Engineer V. N. Oralov, "that the new shop was accepted in an incomplete state, with things unfinished."

A specialized trust was organized for the reconstruction at the Kolomna plant. Its own reputation was spared, in spite of the fact that what was unfinished, that they are now, moaning and groaning, "completing the equipping" of, was exceedingly significant. For example, there turned out to be no body assembly, welding and lining line in the shop, no diesel locomotive assembly and frame and roof welding section, and much more. Out of ten positions named in the order, the time frames of six of them are disrupted today.

How can these gaps in technology be filled in? Old equipment is being dragged into the new shop. On it, outside the basic program, additional TEP-70 parts are being manufactured. That is how the stamping section operates now. And if there is no opportunity to drag the old into new halls, "the mountain comes to Mohammed"--they try to set up the manufacture of the assemblies for the new diesel locomotive in the old shops. Thus is created the illusion of the efficient operation of new production.

What can you say, it's tough to make a new diesel locomotive "on your knees."

"For sure," sighs V. P. Volodin. "Here's another problem: today we are short 12,000 tons of non-standard equipment. We don't have the manpower to manufacture it ourselves."

"Such a practice has developed in the industry," explains V. N. Oralov. "The plant has to manufacture non-standard equipment itself. An order of the minister was published in 1981 on the development of capacity in the existing specialized shop at the Kolomna plant for up to 2,000 tons a year. The funds are fully allocated."

"The plant collective had no opportunity to execute fully the minister's order," says Kolomna Plant Association General Director V. P. Strelnikov. "The main reason was a lack of people. We were able to raise the capacity of the shop to 1,500 tons a year. There is still no specific solution to the question of manufacturing non-standard equipment. Our auxiliary production shops are very busy."

"Just why do we have to make it ourselves?" wonders V. P. Volodin. "We've got a real economy. We make the plows ourselves and we do our own plowing. We don't receive a single basic part cooperatively for the locomotive or the diesel. How can you lower the labor intensiveness here?"

"The point is that the TEP-70 assimilation plans stipulated that a portion of the diesel parts would be manufactured at specialized plants and then shipped to Kolomna," V. N. Orlov explained the situation. "They make up 12 percent of the labor intensiveness of the engine. Due to the limited capital investment allocation to Soyuzdizelmash, specialized production did not receive the proper development. Now there are no realistic opportunities to develop cooperative production."

The renovation of production is being conducted with an estimate of cooperative production that, it has become clear, will not materialize. But no changes were made in the plant reconstruction plan in this regard. Additional funds were not allocated. This means that the plant must find a way out of this situation with internal reserves as well. And no one knows yet, neither at Soyuzdizelmash nor at the Kolomna plant, to what limits the labor intensiveness of the TEP-70 can be reduced. After the multitude of corrections that have been made in the diesel and locomotive body plans, the labor intensiveness and production cost of the vehicle have grown objectively in comparison to the initial ones.

The projected labor intensiveness of the TEP-70, which was discussed at the meeting of the ministry's active membership, will forever remain a dream for the workers of that department.

To what then should the plant be oriented in determining the productivity of labor in the manufacture of the new locomotive and in calculating the number of workers for this production?

To assimilate the production of new equipment out of touch with realistic reference points for its labor intensiveness, cost and recouping is to proceed blindly toward the goal.

At a CPSU Central Committee conference on accelerating scientific and technical progress it was especially stressed that it is not just any renovation of production that is necessary, but only one that is accompanied by the incorporation of the most progressive technology and has the greatest economic and social effect.

It is precisely toward this approach in assimilating the production of the new diesel locomotive that the Kolomna Association and the personnel of the industry should demonstrate active concern.

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RAIL SYSTEMS

UPDATE ON VL86 ELECTRIC LOCOMOTIVE TESTING

Moscow GUDOK in Russian 19 Nov 85 p 2

[Article by VEINII [All-Union Scientific Research, Planning, Design and Technological Institute of Electric Locomotive Building] Senior Scientific Associate and Candidate of Technical Sciences I. Talya, Novocherkassk: "The Technology of the 12th Five-Year Plan: An Electric Locomotive with Asynchronous Engines"]

[Text] The first 12-axle VL86 electric freight locomotives with 11,400 kilowatts of power and frequency-regulated asynchronous traction engines will appear on the country's railroads at the beginning of the 12th Five-Year Plan. One of the versions developed is currently being manufactured at NEVZ [the Novocherkassk Electric Locomotive Building Plant], and the other is undergoing adjustment testing at VEINII. The Finnish firm of Stromberg is also participating in the creation of the fundamentally new and promising locomotives alongside the domestic organizations.

The newly created locomotives will provide enhanced traffic and freight capabilities on lines electrified with alternating current, as well as reduced cost and energy intensity in shipping.

The undercarriage of the VL85 is used. Roughly 75 percent of the parts and assemblies are standardized. The consumption of rolled ferrous metal per kilowatt of power is reduced by almost 30 percent compared with the series-production VL80s.

The traction engines are an outstanding feature of the future locomotives. Research was conducted long ago on how to utilize asynchronous machinery in locomotives that have no commutator--that vulnerable unit of a direct-current engine. And such an engine--the NB-607--was created. According to preliminary data estimates, its power can be raised to 950 kilowatts, while direct-current machinery can reach a maximum of 835 kilowatts. With the same power and equivalent parameters it has 10-15 percent less mass. The consumption of copper is reduced by half by eliminating the commutator.

A test group of asynchronous traction engines is being tested at VEINII.

A search is being conducted for a rational solution on how to overcome the principal difficulty--the double transformation of electricity that is accompanied by an increase in transformer mass, dimensions and cost.

It is proposed to conclude testing by the end of this year with the aim of determining the maximum power of the new traction engines in long-term and hourly operation, as well as a number of other energy and electro-mechanical parameters.

The first tests of the asynchronous traction engines were successful. They demonstrated good energy characteristics.

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TE-127 DIESEL LOCOMOTIVE TESTING

Moscow PRAVDA in Russian 27 Nov 85 p 6

[Article by Engineer M. Berezhnoy and PRAVDA Contributing Correspondent P. Mazalov, Voroshilovgrad: "A Locomotive Tests Its Strength: Tests Underway"]

[Text] This train, that traverses the Voroshilovgrad--Kondrashevskaya--Novaya--Starobelsk Mainline from time to time, draws attention to itself. At the "rear" travels the already tested and series-produced M-62 diesel locomotive. In the middle of the consist is a laboratory car, and at the head is a locomotive of somewhat unusual form and "substance"--the TE-127 with factory number 001.

"This is zero one. Request the "green" for departure," requests test engineer V. Kizim over the radio.

The train increases speed.

The kilometer posts flash by. The landscape of the Donbass rushes past the windows--sparkling green winter crops hidden here and there by a white veil, chalk-white mountains on the horizon, the mirror of the lake of Shchastye, the city of power engineers...

"Attention!" over the loudspeaker came the command of A. Tkachenko, manager of the dynamic testing department of the planning, design and technological association of the Voroshilovgrad Diesel Locomotive Building Plant. "A section with a radius of curvature of 600 meters is ahead. Prepare for measurement."

The train continues to rush headlong, and the recorders have already begun to register various indicators. The effect of the locomotive on the rails and, vice versa, the effect of the railroad bed on the vehicle, the degree of noise inside the cabin and outside...

The locomotive team under V. Kizim is confidently executing the assigned program. He has broken in many types of locomotives on various mainlines of the country. He speaks of the TE-127 with particular warmth.

"A very promising vehicle," considers Victor Prokofyevich. "Great power-- 2,400 horsepower per unit combined with a light load on the axle--a total of less than 16 tons, almost a third less than usual. The speed is up to 160 kilometers per hour. The locomotive can operate on rails of various gauges."

"The diesel locomotive was developed by a group headed by design manager K. Mishchenko," says Voroshilovgrad Diesel Locomotive Association General Designer S. Filonov. "This vehicle, it seems, shows itself well both at home and abroad. An increased requirement for locomotives of this type can now be sensed: light, fast, comfortable and with a minimal effect on the track. The vehicle can, moreover, operate in either a passenger or a freight version."

A series of original technical solutions are embodied in the TE-127. An additional power-supply generator was installed to heat the cars and it uses a two-stage spring suspension. Maximum comfort for the train crew is envisaged.

A large portion of the country's mainline diesel locomotives are produced at the association in our story. The locomotives of the Voroshilovgrad workers have received the highest awards at international trade fairs, as well as at various Soviet exhibitions. The TE-127 bears the designation of the famous enterprise with honor.

The novice is being prepared for the long haul. The Transport-86 exhibition will open in the spring of next year in Moscow. This light and fast vehicle will also take its place alongside the heroic diesel locomotives.

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RAIL SYSTEMS

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CONDITION OF GRAIN CAR FLEET ANALYZED

Moscow ZHELEZNODOROZHNYI TRANSPORT in Russian No 10, Oct 85 pp 35-36

[Article by Candidate of Technical Sciences G. V. Raykov and Engineer M. I. Gudoshnikov: "The Technical Condition of the Grain Cars"]

[Text] In 1974 the Kryukovo Railroad Car Building Plant (KrVSZ) built the first prototypes of grain cars, a new type of specialized rolling stock. The series manufacture of these cars was begun in two years with model 11-739, which was produced up until 1982 with practically no structural changes. It was deemed expedient just to install covers to seal the hatches on the unloading apparatus and to equip the cars with walking platforms with the aim of increasing labor safety in executing the loading and unloading operations.

In 1982 the plant mastered the output of the new 19-752 model grain car. The chief design distinction is slit-shaped loading hatches. This made possible an increase in body volume to 94 cubic meters, an increase in cargo capacity to 70 tons, and an acceleration of car loading. The remaining parts and assemblies of the two models are identical and interchangeable. The principal bearing elements of the design are manufactured from 09G2D steel, and the body plating and the roof are of 10KhNDP enhanced-corrosion-resistance steel.

About 30 percent of grain freight is currently shipped in grain cars, with the rest shipped in general-purpose boxcars. It is projected that all grain shipments will be carried out in specialized grain cars in the future. Consequently, the number of them in the fleet will increase significantly. This requires of the workers in the railcar area the corresponding preparation of repair facilities and the improvement of the maintenance of these cars.

In order to resolve the tasks noted, the collection and analysis of detailed information on the technical condition of the grain cars in operation arriving for planned and unplanned repair are necessary, as well as the actual amount of labor, material and financial expenditures on their renovation. The execution of this work is hampered, however, by the fact that the grain-car number does not contain information on its type. In all accounting and reporting documents they are either of the "other cars" or "boxcars" category. This complicates enormously or makes impossible the establishment of such most important indicators as the frequency of grain-car occurrence in minor shunted repairs, the actual cost and labor intensiveness of depot repair and others.

Moreover, a coefficient of reduction is not established for grain cars, and therefore the boxcar coefficient is applied for them in the depot, although according to objective data it should be lower.

Soon the first major series of railcars should be arriving at the repair plants for capital repair. The absence of a clear conception of the condition of the cars, caused by the existing accounting and reporting documentation system, seriously complicates the preparation of productive capacity for their repair and does not allow an evaluation of the requirements of labor, material and financial resources for the capital repair. Measures have recently been adopted to eliminate the shortcomings noted. By way of illustration, the new car numbering introduced in 1985 makes it possible to separate out grain cars from the main body of cars when necessary. Therefore the form of accounting and reporting documents should be urgently reviewed at all levels on the analogy of the general-purpose cars.

The currently operative system of freight car maintenance and repair stipulates two types of planned repairs for grain cars: depot and capital. The former is executed annually (except for the first two years after building and capital repair), and the latter every 10 years. This rate was established at the end of the 1970s, when operating and repair experience with grain cars was insufficient--they had only been in operation a total of 2-3 years. The repair rate was selected on the basis of expert evaluations using the analogy of a boxcar with a 106-cubic-meter body volume.

Now eight years of grain-car operating and repair experience have been accumulated, which allows a sufficiently detailed evaluation of the correctness of the rate of planned repair. This work was carried out by the All-Union Scientific Research Institute of Railroad Transportation. An on-the-spot observation of no less than 24 cars built in each of the years from 1977-83 was carried out on the Moscow, Baltic and October railroads. Principal attention was devoted to the technical condition of the grain-car body, since it is precisely that that determines the need for capital repair. The working fitness of the unloading apparatus was evaluated only by external indications. It was considered to be in good order on loaded cars if the unloading hatches were sealed and there was no grain leakage through them, and on unloaded cars if there were no cracks in the closed unloading hatches. According to these indicators, 3 empty cars were found with defective unloading apparatus.

In observation, all body defects were recorded, both those that were eliminated and those that were not. This not only made possible an analysis of the level of working fitness of the body at a given moment in time, but an evaluation of the durability and reliability of the design by revealing poor assemblies and determining the intensiveness of their accumulated failures.

It was established that the same defects were observed in grain cars as in standardized cars: bending, cracks and a weakening of the fastening of certain assemblies and parts. The most typical defect was bending--more than 60 percent of the total number of defects. On the average, one observed car had 7.87 defects, of which many were not eliminated. Most often, the side and front panels of the cantilevered section, the side struts and the intermediate

support beams were damaged. The number of defects in these elements in the car was in direct proportion to the length of time in operation. These were basically localized bendings, the majority of which arise in unloading due to various violations of the requirements of rolling stock safe-keeping.

Other defects typical of general-purpose cars are also encountered in grain cars. These are damage to the yardmaster footboards, hand couplings and parking brake handwheels. All of these arise basically as a result of the cars' passing through too-small areas, as well as due to the use of these parts for pulling cars into loading and unloading places. It was also established that the design of the apparatus for sealing the unloading hatches is imperfect and needs modernization. In sealing or unsealing the car the apparatus is bent so as to pass through or extract the tying wire, and this leads to the deformation of the apparatus or its loss.

A numbers of defects in such car elements as end struts, braces and internal ladders were revealed. The basic type of defect in these elements is bending. The walking platform has two types of defect: rupture of the weld between the railing and the support and cracks in the weld or in the metal in the area around the weld and in spots where the flooring plate is welded to the center beam and the side plate of the cantilevered part. The cracks were caused by car vibration in motion.

Vibration also acted negatively on the bolt fastening of the uncoupling lever, as well as the bolt fastening of the braking equipment (the reserve reservoir and the brake cylinder). It should be noted that the bolt fastenings are frequently not tightened in depot repair due to corrosion and bolt bending. The bracket of the uncoupling lever is welded to the front plate by electric-arc welding, but after a while cracks appear in the weld in operation.

In an internal inspection of the grain cars in the course of observation, the intensiveness of corrosive wear on the wall and roof coverings was evaluated. It was established that there was no corrosion from the floor to the level of grain loading, but higher up (especially on the ceiling) there were traces of corrosion, although there were no cavities even after 7 years of operation. Signs of the corrosion process were revealed only in Soviet-made grain cars, since their interior surfaces are not painted in manufacture. In cars built in Romania, also operated on our railroads, all interior surfaces are painted. Good adhesion between the metal and the paint was secured in them and no traces of corrosion were found. Taking this into account, to our view it would be expedient to paint the interior body surfaces, if only the upper part, in domestic manufacture as well. Thanks to this it would be possible to avoid replacing the roof due to corrosion wear in capital repair over the whole service life of the grain car. The possibility of increasing the period between capital repairs would also arise, since other defects can be eliminated under depot conditions.

The covers of the loading hatches were subjected to more intensive corrosion. After only 5 years of operation, total irregular pitting corrosion was observed among them. In this regard, it would be expedient to manufacture and test a batch of covers made from non-metallic materials such as fiberglass.

Empirical frequency curves were constructed from the observation data for the recurrence of those assembly and part defects that are encountered most often in operation. Their analysis demonstrates that with the increase in time of car operation the number of defects that are not eliminated grows. This is explained both by the physical aging of the body and the low quality of depot repair. Due to incomplete restoration at the depot, defects accumulate on the cars that do not have a direct influence on traffic safety or on the working fitness of the car, such as some forms of bending. A large number of such defects, however, can sooner or later lead to the weakening of design elements and to all of the resultant consequences. Raising the quality of grain-car repair is therefore an exceedingly urgent task.

There is currently not one depot on the network that specializes in the repair of this type of car, although the advantages of the specialization of repair enterprises are well known. The majority of depots now repairing grain cars plan to repair a total of 25-300 cars a year. Therefore they not only do not have the necessary specialized repair tooling at their disposal, but frequently do not even have a technological repair process for this type of rolling stock worked out. Taking into account the growth in the number of grain cars in the fleet, to our view it would be expedient, on many railroads where the principal volume of grain shipments in specialized rolling stock is carried out, to create specialized depots for repairing grain cars with the tooling appropriate for them and the rational organization of repair operations. It is also important to develop a set of efficient repair equipment for correcting supports, struts and unloading mechanisms and hatches on grain cars.

Overall, the on-site observation of grain cars showed that their technical condition is better than that of general-purpose cars of the same year of manufacture. The evaluation of the state of corrosion of the covers, which determines the rate of capital repair, makes it possible to recommend an experimental increase in the period of grain-car operation before the first capital repair to 12-14 years. A final decision can only be made, however, after an analysis of the technical condition of the cars that have operated more than 10-12 years since their construction.

To avoid defects in grain cars due to operating rules violations, it is necessary to increase the number of attachment points for pulling cars in loading and unloading operations and to review their locations. Moreover, the design of handrail fastening assemblies, walking platform flooring plates, and internal ladders, the rubber sealing of hatches and the control handle of the uncoupling mechanism should be improved and the closing apparatus of the unloading hatch mechanisms should be modernized. To increase the longevity of the cover, and consequently, to increase the standard service life of the car interior surface overall as well as that of the side walls above the level of grain loading, they must, as already noted, be protected with an anticorrosive coating. This will create favorable pre-conditions for the transition to a single capital repair for grain cars over the standard service life.

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RAIL SYSTEMS

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MEANS OF IMPROVING USE OF REFRIGERATED RAILCAR FLEET

Moscow ZHELEZNODOROZHNIY TRANSPORT in Russian No 10, Oct 85 pp 36-38

[Article by Engineer Ye. A. Krutova: "Thermal Cars"]

[Text] Improving the utilization of the refrigerated railcar fleet and the parameters of newly supplied refrigerator cars and reducing expenditures on their repair and maintenance are important reserves in raising the efficiency of perishable freight shipments.

The refrigerated car fleet currently consists basically of general-purpose rolling stock: refrigerated trains, units and self-contained cars (ARV). Fleet replenishment takes place by 5-car unit and ARV. Power availability is constantly growing and the heat-engineering properties of refrigerated cars are improving. Thus, where the total power of diesel generators required for one freight car of a 23-car train built in 1953-54 was 7.5 kilowatts, for currently supplied 5-car units and ARVs it is 37.5 and 26.4 kilowatts respectively. The heat transfer coefficient of the body is almost 1.4 times lower, and the strength of the enclosed structures of the freight compartment has been raised. All of this makes possible a raising of the quality of perishable goods shipping and the reliable maintenance of specific temperature conditions in the cars.

At the same time, an analysis of operating conditions and data on the utilization of the electrical-power and refrigeration equipment demonstrates that the shipment of a broad range of thermally prepared freight does not require their cooling or heating. This is made possible by the good heat-engineering properties of the cars. By way of example, frozen and chilled freight, butter, margarine, fats and various canned goods are shipped in the winter without turning on the equipment, as well as all canned goods, mineral waters, juices, and frozen and chilled freight in the transitional months, for a period of up to 5-6 days.

The opportunity also exists for the shipments within railroads of frozen and chilled freight in the summer and freights that do not permit freezing (fruit and vegetable canned goods, juices and the like) in winter. The active development of agriculture in all areas of the country and the organization of subsidiary farms at industrial enterprises produces the basis for a proposal to increase short-run and decrease long-run shipments of a broad range of perish-

able freight that is now shipped in refrigerated trains and units with the equipment basically not operating. This is undoubtedly not an economically expedient utilization of refrigerated rolling stock.

Cars with perishable freight are unloaded at practically all stations that are open for conducting freight operations, even though their shipment is considerable concentrated. This dispersion of perishable freight unloading requires an increase in the proportion of single refrigerated cars in the fleet, which proportion is still exceedingly insignificant.

All of this indicates that it would be expedient to have thermal railcars in the refrigerated car fleet. The good heat-engineering properties of thermal cars would ensure the necessary preservation of shipped freight, and the absence of electrical-power and cooling and heating equipment will permit a reduction of expenditures on the repair, upkeep and maintenance of refrigerated cars. The operation of thermal railcars will also make possible the more rational and efficient utilization of refrigerated trains, units and ARVs.

The All-Union Scientific Research Institute of Railroad Transportation (VNIIZHT) has developed the requirements for the heat-engineering and operating parameters of thermal car planning. The requirements envisage the assurance of a minimal loss of accumulated heat energy by the freight, the mechanized loading and unloading of freight parcels on pallets, the full utilization of the freight capacity of the car, the conditions of air circulation around the freight stack, etc.

The thermal cars are intended for the shipment of thermally prepared freights that can tolerate a temperature change in shipment of no more than 10 degrees Celsius. In the summer and the transitional months, canned goods, juices, mineral waters and other non-alcoholic beverages, sterilized and whole dry milk, eggs and chocolate products can be shipped in them, and in the winter, frozen meats, fish and fish products, fats, butter, sausage and other products.

The transportation time limits of freights that cannot tolerate freezing depend in the winter and summer months on the temperature of the freight in loading and the typical climatic conditions of the freight car route. These freights are delivered in the transitional months without distance limitations. In the winter, frozen and refrozen freight, presented for shipment at a temperature of minus 9 degrees Celsius and below (besides low-temperature ones), meat, fats and margarine can also be shipped without distance limitations. In the transitional months, these freights are accepted for shipments of no more than 4 months in the south and 6 days in the north, and no more than 3 days in the summer.

Taking into account the given temperature conditions and shipment times for perishable freight, the heat-engineering properties of thermal railcars should be characterized by a heat transfer coefficient that does not exceed 0.17 watts per square-meter-Kelvin and a density parameter (air flow for the maintenance of a constant 50-pascal head level in the freight compartment) of no more than 20 cubic meters per hour. After two years of operation the thermal

car density parameter should not be greater than 30 cubic meters per hour. The heat transfer coefficient after 10 years of operation cannot increase to more than 0.20 watts per square-meter-Kelvin.

Research results recommended the construction of a "sandwich"-type car body using polyurethane foam for insulating material in the middle panel layer. This material will fulfill two functions simultaneously: it will provide good insulating properties for the body and will serve as the mechanical link for the covering of the "sandwich"-panels.

Mechanizing the loading and unloading operations and placing freight in parcels on pallets, as already noted, is envisaged for reducing car idle time. In accordance with All-Union State Standard (GOST) 19434-74 for ensuring the efficient shipment of perishable freight in parcels, the useful width of the freight compartment should be 2,600 millimeters (mm), and the height with the placement of boxed pallets in 2 tiers should be no less than 2,400 mm.

Maximum utilization of the load and freight capacity of the thermal cars increases the amount of heat energy accumulated by the freight and, consequently, expands shipping capability. Taking this into account, the load capacity of a thermal car is increased to 584 kilonewtons (59.5 tons of force) by raising the axle load to 228 kilonewtons (23.25 tons of force). This makes possible the efficient utilization of the car in transporting the heaviest perishable freights with a loading weight of 4.4 kilonewtons per cubic meter.

Refrigerated railcars with two leaning-type single-leaf doors with internal dimensions of 2,200 x 2,000 mm have long been produced. With existing types of loaders and general-purpose pallets, it is necessary to stow from 5 to 13 percent of the pallets by hand even in cars with doorway aperture width of 2,200 mm. It has been established that the hand placement of parcels on pallets can only be eliminated when the doorway aperture width is no less than 2,700 mm.

As regards the use of boxed, post and flat pallets, the necessity has also arisen for increasing the height of the car doors. It is necessary to ensure the placement and unloading of pallets in two tiers along the entire length of the car, including the space between the doors. With a useful height of 2,400 mm in the freight compartment (from the floor grating), the door height, taking into account the height of the floor gratings (100 mm) and the handling clearance (50 mm), should be 2,550 mm. The ramps for the entry of electric loaders into the car should possess horizontal insertion.

In using modern loaders with 10 kilonewtons of lift capacity, the floor and free floor grating of refrigerated cars are calculated proceeding from a static load on the loader axle of 24 kilonewtons with a track width of 750 mm and loader rubberized wheel support area of 100 x 100 mm. Taking into account the dynamic factor, the total load on the loader axle is taken to be equal to 36 kilonewtons. The thermal car floor gratings can even be not needed with the full transition to perishable freight shipment by parcels on pallets, which will ensure natural air circulation between the car floor and the freight stack.

As demonstrated by research of the power engineering department of VNIIZhT, the arrangement of the freight in compact stacks improves the uniformity of the air flow distribution with the presence of floor gratings and vertical flutes on the interior covering of the car. An inherent regulation of the temperature pattern takes place. The optimal uniformity of the temperature pattern is achieved with a distance of 400-450 mm between flutes and a flute height of 20 mm. In this case, heat loss through the car walls is diminished by 3-6 percent and the interior body volume is increased by 2 percent.

The technical requirements for developing and planning thermally insulated cars were coordinated with and approved by the Ministry of Railways (MPS). The Dessau Plant (GDR) has begun the planning and construction of experimental thermal cars. Their series production and supply in the USSR is projected for the future.

As shown by technical economic calculations, the use of thermal cars will allow a 32-percent reduction in loading and unloading times, raise the route speed in freight runs by 5 percent, and save approximately 400 kilograms of fuel for a single freight run compared to automated refrigerated cars. The absence of heating-and-cooling and electrical-power equipment on thermal cars increases the useful volume of their freight compartments by 33 percent. The amount of factory repairs is reduced and the time between them is increased.

VNIIZhT, in preparing for thermal car operation, has carried out theoretical and experimental research on determining the rational regions for their operation and the range of products and conditions for perishable freight shipment. The results of the research were verified in operational conditions using automated refrigerated cars with disconnected equipment (in thermal-car mode).

Canned goods have been shipped in ARVs in the winter every year since 1979 in thermal mode from the Odessa, Moldavian, Lvov and a number of other railroads to the European portion of the country, the Urals and West Siberia. ARVs in the thermal mode are used on the Northern Railroad to ship perishables in local transit. The refrigerated car depots of the Sinelnikovo Dnepr and Bessarabian Moldavian railroads prepared a group of automated cars for use in the thermal mode on the South Urals, Sverdlovsk and West Siberian railroads.

A summary of the results of research and experience in using ARVs as thermal cars confirmed the technical and economic efficiency of using thermal cars whose heat engineering properties are one-and-a-half times greater than ARVs. Based on the data received, VNIIZhT developed instructions for the operation of thermal cars and the conditions for shipping perishable freight in them.

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OFFICIALS SCORED OVER SUPPRESSION OF NEWSPAPER CRITICISM

Maritime Fleet Collegium Charges

Moscow VODNYI TRANSPORT in Russian 22 Feb 86 p 3

[Unattributed article: "At the Collegium of the USSR Ministry of the River Fleet"]

[Text] In an expanded session attended by the chiefs and secretaries of the party committees of most shipping companies, the editors of basin newspapers and the editors-in-chief of the newspaper VODNYI TRANSPORT and the journals MORSKOY FLOT, VYMPEL and RADIOBYULLETEN, the collegium of the Ministry of the Maritime Fleet [MMF] reviewed the question "The Tasks Arising from the CPSU Central Committee Decree on Instances of Gross Administrativeness and Suppression of Criticism with Regard to the Editorial Staffs of the Newspapers VOZDUSHNIY TRANSPORT and VODNYI TRANSPORT."

It was indicated at the collegium that the CPSU Central Committee is regarding instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNIY TRANSPORT and VODNYI TRANSPORT on the part of managers of the Ministry of Civil Aviation [MGA], the Ministry of the Maritime Fleet, and the RSFSR Ministry of the River Fleet [MRF], as well as the trade-union central committee for maritime and river fleet workers, as an effort to protect their sectors from just criticism for operating shortcomings and to subordinate the activity of the newspapers to narrow departmental and local interests.

The CPSU Central Committee has obligated the collegia and party committees of the ministries and the political administration of the MGA to adopt decisive measures to raise the level of criticism and self-criticism in the collectives of the ministries and departmental organizations, and to demand of communists the fulfillment in the strictest manner of the requirements of the CPSU Charter on the development of criticism and self-criticism as a tested method for improving life in Soviet society.

The CPSU Central Committee directs attention to the fact that the activity of the newspapers and journals requires constant support on the part of management organs and party, trade-union and Komsomol organizations. Some management workers of the ministry and its enterprises and organizations, however, frequently ignore their features directed at the elimination of

shortcomings existing in the operations of maritime transport, and limit themselves to a correspondence with the editorial staffs with formalistic replies trying to educate and "correct" the editorial staff and authors of the publication without demonstrating concern for the needs of the journalists.

More than 60 features were published over the course of 1985 in VODNYI TRANSPORT directed to a greater or lesser extent toward subunits of MMF. Of the total number, 12 were reviewed directly by ministry management and replies to 51 were published in the newspaper. The editorial staff did not receive replies to a number of published features, including to the article of Comrade Pyankov of the Yakutsk CPSU Obkom "Lessons of the Surgeon" of 26 Nov 85 and the article by Khabarovsk Kray Trade-Union Council Chairman Comrade Dubkov "Lingering Problems" of 24 Dec 85, in which were posed important questions on the improvement of maritime shipping and serious critical observations were made in the direction of MMF. Over all of last year the collegium, regularly reviewing the critical observations of the central press, only twice discussed in direct form the questions raised on the pages of VODNYI TRANSPORT (on 28 May 85 a decree was adopted in response to the article "When Comrades Do Not Agree," and on 24 Dec 85 in response to the results of checks on the activity of the Central Asian Shipping Company with regard to the article "Slanderers and Their Patrons").

The collegium especially stresses the inadmissibility of manifestations of administrativeness and suppression of criticism in relation to the organs of the press and in this regard condemns the actions of LMP [Latvian Shipping Company] Chief Comrade Dyrchenko and other responsible officials of the Latvian Shipping Company, who allowed suppression of the criticism of the author of the article "The Maze of Electronic Service" (VODNYI TRANSPORT of 16 Mar 85), LATVIYSKIY MORYAK correspondent Comrade Glinchuk, as well as the incorrect statements of Deputy Minister Comrade Nikolaychuk directed at VODNYI TRANSPORT concerning the publication of shortcomings in the utilization of computer technology in the LMP and of collegium member and Chief of the Personnel Main Administration Comrade Kuznetsov directed at the editor-in-chief of the newspaper.

The impermissible disregard of the newspaper features also concerns other sector publications. Thus, the article "Problems of the Port of Magadan" in the journal MORSKOY FLOT (No 12 of 1983) was reviewed in a timely manner, and measures undertaken were reported to the editorial staff, by the Magadan CPSU Obkom, USSR Gosstab [State Committee for Material and Technical Supply], and the appropriate subunits of USSR Minmontazhspeystroy [Ministry of Installation and Special Construction Work], Minavtotransport [Ministry of the Automotive Industry], Minzag [Ministry of Procurement] and the RSFSR Mintorg [Ministry of Trade]. At the same time, this article and subsequent features in the journal on this topic generated no comment on the part of either the MMF central apparatus or the Far Eastern [DVMP] and Sakhalin [SakhMP] shipping companies. A reply from the DVMP was received and published in issue No 6 of the journal in 1985 only after three personal reminders to Chief of the Far Eastern Shipping Company Comrade Volmer, and the SakhMP has yet to react to six reminders from the editorial staff.

Glavflot [Transportation and Operation of the Fleet and Ports Main Administration] Chief Comrade Zbarashchenko sent a letter to the editorial staff on this issue only after a critical speech by the journal's editor-in-chief at a meeting of the ministry party active membership in 1984. The report "Problems are Being Resolved too Slowly" on shortcomings in the interaction of related transport workers in the Kaliningrad Transshipment Center did not arouse the interest of Glavflot or the Baltic Shipping Company (Comrade Kharchenko) and went unanswered. Additional reminders from the editorial staff were needed to obtain a reply from Glavflot, the Mortehtsudremprom [Maritime Technical Salvage] All-Union Association (Comrade Pervov) and other MMF subunits.

An answer to the sharply critical materials on the results of a journalistic swoop on the student dormitories of OIIMF [Odessa Institute of Maritime Fleet Engineers], published in the newspaper MORYAK in the middle of May 1985, was received by the editorial staff from the institute management (Comrade Zagoruyko) only in January of this year after additional reminders and a discussion of this issue at a session of the basin trade-union committee. The management of the Odessa SRZ [Ship Repair Yard] imeni 50th Anniversary of the Soviet Ukraine (Comrade Yarovskiy) reacted with a formal reply to the article "If the Circle is Disenchanted" on the irresponsible attitude toward their professional and technical institution. An answer to the article "With a Paper Sword" on shortcomings in the struggle against drunkenness in the Novorossiysk SRZ (Comrade Chekulayev) was received by the editorial staff of the newspaper CHERNOMORETS five months after its publication as a result of the intervention of the staff members of the CPSU Central Committee. Instances of slow reactions and formal replies to the features of the basin newspapers also exist on the part of the Soviet Danube (Comrade Pilipenko), Azov (Comrade Shunin), Caspian (Comrade Gashumov), Murmansk and several other shipping companies.

The requisite attention also does not exist toward ensuring standard working conditions for the journalists of the industry press. The Economic Planning and Finance and Currency Administration (former chief Comrade Khozyainov), due to the lack of monitoring on the part of Deputy Minister Comrade Nedyak, had a formalistic attitude toward the fulfillment of his instructions on organizing the repair of the accommodations for the editorial staff of the newspaper VODNYY TRANSPORT. This led to the fact that the editorial staff accommodations finally reached an unsafe state.

The collegium decrees:

- the adoption, for steadfast leadership and fulfillment, of the decree of the CPSU Central Committee on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYY TRANSPORT and VODNYY TRANSPORT.

And obligates:

- deputy ministers and managers of administrations and all-union associations, shipping companies, enterprises, organizations and educational institutions of the industry:

along with party organizations, to require of responsible officials in the strictest manner a responsible attitude toward criticism and to punish those

guilty of the suppression and disregarding of criticism, up to and including their dismissal from posts held;
to react in a timely and business-like manner to features in the press, television and radio, and to inform the editorial staffs in a timely manner of measures taken without waiting for reminders and repeated publications;
to regularly bring forward for the discussion of collegia, shipping company councils and meetings of labor collectives and social organizations the most acute and urgent issues from features in the press.

-shipping company chiefs and the chiefs of the ports of Arkhangelsk, Odessa, Ilichevsk, Zhdanovsk and Poti and the directors of the Krasnaya Kuznitsa, Odessa imeni 50th Anniversary of the Soviet Ukraine and Ilichevsk imeni 50th Anniversary of the USSR ship repair yards:

to discuss, at sessions of shipping company and enterprise councils along with party and trade-union committees, the decree of the CPSU Central Committee on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYY TRANSPORT and VODNYY TRANSPORT and the given decree of the collegium, and to designate measures for the elimination of the shortcomings uncovered.

The collegium noted that Latvian Shipping Company Chief Comrade Dyrchenko and other responsible officials of the LMP, guilty of the suppression of criticism, have been punished according to party procedure.

For the violations permitted, the collegium has adopted a resolution for the disciplinary responsibility of Deputy Minister Comrade Nikolaychuk and collegium members Personnel Main Administration Chief Comrade Kuznetsov, Glavflot Chief Comrade Zbarashchenko and Mortehtsudremprom Association Chief Comrade Pervov.

Deputy Minister Comrade Nedyak was given a stern warning.

Shipping company chiefs Comrade Volmer of the Far Eastern, Comrade Kharchenko of the Baltic, Comrade Pilipenko of the Soviet Danube, Comrade Shunin of the Azov and Comrade Gashumov of the Caspian were strictly instructed, along with ship repair yard directors Comrade Yavorskiy of the Odessa imeni 50th Anniversary of the Soviet Ukraine, Comrade Chekulayev of the Novorossiysk and OIIMF Director Comrade Zagoruyko.

The collegium also adopted a whole series of other resolutions directed at the elimination of the shortcomings noted in the decree of the CPSU Central Committee.

Responsible officials of the CPSU Central Committee took part in the work of the collegium, and V. I. Davydov, first deputy chief of the CPSU Central Committee Transport and Communications Department, spoke at the session.

Maritime Fleet Partkom Actions

Moscow VODNIY TRANSPORT in Russian 25 Feb 86 p 3

[Article by USSR Ministry of the Maritime Fleet [MMF] Partkom Secretary Yu. Tretyak: "At the Partkom of the USSR Ministry of the Maritime Fleet"]

[Text] In accordance with the CPSU Central Committee decree on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNIY TRANSPORT and VODNIY TRANSPORT, an expanded session of the Ministry of the River Fleet [MMF] Partkom was held at which the indicated CPSU Central Committee decree was adopted for steadfast guidance and execution, and measures for its fulfillment were also determined.

The secretaries of primary party organizations are required to hold party meetings at which the tasks arising from the requirements of the CPSU Central Committee decree will be discussed and the work of the apparatus will be placed under strict monitoring for the timely and correct reaction to the critical features of the central and departmental press and the raising of the level of criticism and self-criticism in the collectives.

As a result of discussion of the issue at the partkom session, Deputy Minister and Communist V. Nikolaychuk was reprimanded.

Measures of party influence were taken against communists N. Kuznetsov, chief of the Personnel Main Administration, V. Pervov, chief of the Mortehtsudremprom [Maritime Technical Salvage] All-Union Association, and V. Zbarashchenko, chief of Glavflot [Transportation and Operation of the Fleet and Ports Main Administration].

The attention of party committee members was directed toward the weakening of the exactingness and monitoring of the work of the apparatus in reacting to critical features in the press and the development of criticism and self-criticism in the collectives of the ministry.

Deputy Minister B. Trunov, Chief of the Personnel Main Administration N. Kuznetsov and other members of ministry management were entrusted with the improvement of communications and the arrangement of mutual information with the central and departmental press with the aims of raising the effectiveness of publications and strengthening the influence of the mass media on the successful execution of the plans for the social and economic development of the industry.

A resolution was adopted to hear a report at the partkom session in the third quarter of this year on the course of the realization of the plan approved by the partkom of organizational and political measures for the fulfillment of the indicated decree of the CPSU Central Committee.

Moscow VODNYI TRANSPORT in Russian 1 Mar 86 p 3

[Unattributed article: "At the RSFSR Ministry of the River Fleet Collegium"; first paragraph is VODNYI TRANSPORT introduction]

[Text] The collegium of the RSFSR Ministry of the River Fleet [MRF], at an expanded session with the participation (via communications channels) of managers of shipping companies, basin administrations of ways and canals, secretaries of partkoms and Komsomol committees of shipping companies and the editorial staffs of basin and plant large-circulation newspapers, reviewed measures for the fulfillment of the CPSU Central Committee decree on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYI TRANSPORT and VODNYI TRANSPORT.

The collegium regarded the CPSU Central Committee decree as a manifestation of the party's constant attention toward raising the effectiveness of the press, the truthful discussion of critical problems in the pages of newspapers and the development of criticism and self-criticism. It was noted that the newspaper VODNYI TRANSPORT plays a large role in educating river transport employees and mobilizing them for the early fulfillment of plan targets and adopted socialist obligations. The newspaper is the most accessible source of information for river workers on the operations of the industry and the leading workers and innovators of production.

The features of the newspaper render great practical assistance to the shipping companies in the establishment of harmonious operations with related forms of transport and the shippers and recipients of cargo.

On 30 Apr 85 the ministry collegium reviewed the question "Strengthening the Attention of Main Administrations, Administrations, Shipping Companies and Basin Administrations of Ways and Canals Toward the Critical Features of the Newspapers" and required of the managers of all subunits a business-like attitude toward the features of the mass media and their fuller utilization in resolving tasks of economic and social development and in the development of socialist competition in light of the requirements of the April (1985) Plenum of the CPSU Central Committee.

The majority of the managers of administrations, shipping companies, basin administrations of ways and canals, enterprises and organizations devote constant attention to the features of the central and basin newspapers and the journal RECHNOY TRANSPORT. As a rule, critical articles on vessel idle time in ports and raising the preservation of shipped cargo, improving passenger service, developing subsidiary farms and other questions on the activity of river transport are reviewed in a timely fashion and measures are taken with regard to the features.

Thus, according to the article "A Bag of Sugar... for a Cup of Tea," published in the newspaper VODNYI TRANSPORT on 14 Nov 85, Comrade Vydrin, chief of the workers' supply administration of the Belaya River Shipping Company, was relieved of his duties for mismanagement and serious omissions in operations.

Upon the publication of "Dismissed... with a Promotion" in this same newspaper on 19 Nov 85, Chief of the Western Shipping Company Ports Department Comrade Ogurechnikov and Chief of the Personnel Department Comrade Danilets were relieved of their duties.

At the same time, some managers did not fully appreciate the critical features of the press, did not take effective measures to eliminate the shortcomings revealed and did not give timely replies to the editorial staffs for the information of the readers through the newspapers.

On 8 Aug 85 the newspaper VODNIY TRANSPORT published the article "Guilty... Funds" on shortcomings in the upkeep of workers' dormitories in the Lena United River Shipping Company. Shipping company Deputy Chief Comrade Tsarik, manager for these issues, did not adopt effective measures for the elimination of the shortcomings and did not reply to the newspaper.

Some managers of river fleet enterprises and organizations, instead of clear answers to the questions posed by the newspapers and the unconditional elimination of the shortcomings revealed, provided formalistic replies.

The replies of Comrade Cheremisin, chief of the Port of Komsomolsk, Amur River Shipping Company Deputy Chiefs Comrades Mazurenko and Baranov, Amur Basin Fleet Committee Chairman Comrade Markov and MRF Capital Construction Main Administration Deputy Chief Comrade Gudarev that were directed to the editorial staff with regard to the "Open Letter Day" materials in the newspaper VODNIY TRANSPORT of 27 Jun 85 bore a general character, did not answer the questions posed and for that reason could not be published in the pages of the newspaper. Belaya River Shipping Company Deputy Chief Comrade Khabibulin and Director Comrade Kapkayev of the Ship Repair Yard imeni Uritskiy of the Volga United River Shipping Company [VORP] produced replies to the editorial staff that were not timely and not specific. Chief of VORP Fleet Traffic and Operations Service Comrade Dunin did not reply to two features in the newspaper BOLSHAYA VOLGA in 1985. There were cases of untimely and superficial reviews of press features in the ministry central apparatus--the Chief Inspectorate of Navigational Safety (Comrade Lashevich) and the Workers' Supply Main Administration (Comrade Artemyev).

The collegium censured the incorrect attitude toward the critical features of the basin newspapers on the part of Comrade Matyukhin, director of the Repair and Operations Yard imeni October Revolution, and Comrade Drachev, chief of the Port of Tomsk of the West Siberian River Shipping Company.

The poor level of activity of the managers of a number of shipping companies and the chiefs of services and departments was noted in the work of basin newspapers.

Managers and specialists of the West Siberian, Vyatka, Belaya, Northwestern, Volga United and White Sea-Onega river shipping companies, the Teplokhod Yard and a number of other enterprises and organizations are rarely featured in the pages of the basin and yard press.

The collegium directed the attention of the managers of a number of enterprises toward the unsatisfactory resolution of questions of creating conditions for the standard operations of colleagues of the basin, port, yard and institute press and ensuring a sufficient quantity of means of communication, reproduction equipment, transport and photographic apparatus.

It was emphasized in the course of the work of the collegium that in publishing articles in the central and basin newspapers, it is necessary to renounce the embellishment of the state of affairs and the concealment of existing shortcomings. Articles with exclusively consumer inquiries also do not help matters. It is necessary to analyze deeply the activity of subunits, uncover existing shortcomings in the operation of the central apparatus and line subunits, and propose effective measures for their elimination. More articles must be published on further improvements in the utilization of fixed capital, the improvement of work style and methods, and the more active utilization of the human factor.

The collegium adopted the CPSU Central Committee decree on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYY TRANSPORT and VODNYY TRANSPORT for guidance and steadfast execution and obligated the deputy ministers and managers of main administrations and administrations of the ministry, shipping companies, basin ways administrations, canals, the Teplokhod and Podvodrechstroy yards, enterprises and organizations: to assist to the utmost the development of principled and constructive criticism and self-criticism and open and justified discussion of urgent problems in the pages of the press, the strengthening of exactingness and the all-round introduction of order, the improvement of the quality of work and the raising of the effectiveness of press features; to ensure the high-quality review of critical observations and the elimination of shortcomings noted in the shortest possible time and to provide a reply to editorial staffs in a timely fashion for the information of the readers; to introduce fundamental questions raised in the pages of the press for the discussion of the ministry collegium and the shipping company councils; to be more actively featured in the pages of the press, directing particular attention toward the intensive path of industry development under new management conditions, the acceleration of scientific and technical progress, the dissemination of leading methods and progressive technology, the reinforcement of planning, labor and executive discipline, the improvement of laborers' working and rest conditions and the improvement of work style and methods; to render the utmost assistance and support to journalists and worker correspondents of the newspaper VODNYY TRANSPORT, the journal RECHNOY TRANSPORT, and basin and yard newspapers, and to create conditions that assist correspondents in their fruitful work, provide them with necessary information, invite them to functions held in the ministry and in localities and hold meetings of the leading workers of production, management employees and leading specialists of the industry with journalists.

It was proposed that the managers of main administrations, administrations, shipping companies, basin administrations of ways and canals, enterprises and organizations of the ministry, along with party and trade-union organizations, analyze in a month's time the state of affairs in the review of the materials of newspapers and journals in their subunits and adopt measures for the

elimination of shortcomings discovered, as well as for the fulfillment of the current resolution of the collegium.

The chiefs of shipping companies and managers of enterprises and organizations with large-circulation newspapers, along with party and trade-union committees, must review questions of improving the activity of newspaper editorial staffs, rendering assistance to them in accommodations and material and technical supply and improving the effectiveness of the basin press.

It was deemed expedient to conduct, along with the trade-union central committee of maritime and river fleet workers, a conference-seminar of editors of basin and large-circulation yard newspapers in 1986 for an exchange of information and a review of the tasks of the industry press in ensuring the fulfillment of the resolutions of the 27th CPSU Congress.

GUKiUZ [Main Administration of Personnel and Educational Institutions] Chief Comrade Lobantsev, along with the mass-culture department of the trade-union central committee of maritime and river fleet workers (Comrade Gusev), are required to prepare by 1 May 86 a proposal for the organization of a public competition of the large-circulation industry newspapers for 1986-90 under the slogan "The Resolutions of the 27th CPSU Congress--To Life."

By resolution of the collegium, Comrade Tsarik, deputy chief of the Lena United River Shipping Company, was reprimanded for ignoring a critical feature of the newspaper VODNYY TRANSPORT.

For a superficial review of the issues raised by laborers in the pages of the newspaper VODNYY TRANSPORT on "Open Letter Day" in the Port of Komsomolsk-on-Amur, Capital Construction Main Administration Chief Comrade Gudarev and Amur River Shipping Company deputy chiefs Comrade Baranov and Comrade Mazurenko were reprimanded.

For delaying the adoption of resolutions on published materials and not informing the editorial staff of the newspaper VODNYY TRANSPORT in a timely fashion, Chief Inspectorate of Navigational Safety Comrade Lashevich and Workers' Supply Main Administration Chief Comrade Artemyev were strictly instructed.

It was proposed to Volga United River Shipping Company Chief Comrade Shchepetov that he review the responsibility of Shipping and Traffic Service Chief Comrade Dunin for the untimely adoption of measures on the critical features in the basin newspaper BOLSHAYA VOLGA upon his return from leave.

The fulfillment of the CPSU Central Committee decree on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYY TRANSPORT and VODNYY TRANSPORT has been placed under monitoring.

River Fleet Partkom Actions

Moscow VODNIY TRANSPORT in Russian 4 Mar 86 p 3

[Article by RSFSR Ministry of the River Fleet [MRF] Partkom Secretary Yu. Shershnev: "At the RSFSR Ministry of the River Fleet Partkom"]

[Text] The RSFSR Ministry of the River Fleet Party Committee, in an expanded session, discussed measures for the fulfillment of the CPSU Central Committee decree adopted upon a review of instances of gross administrativeness and suppression of criticism with regard to the editorial staff of the newspapers VOZDUSHNIY TRANSPORT and VODNIY TRANSPORT.

The partkom obligated the secretaries of party organizations to strengthen monitoring of the work of the apparatus on improving and reinforcing business-like contacts with the editorial staff of the newspaper VODNIY TRANSPORT and on the adoption of exhaustive measures for eliminating shortcomings revealed by the newspaper, to increase exactingness toward manager-communists for the organization of this work in the administrations, to review regularly these questions at party bureau sessions and party conferences, and to require strictly of communists the fulfillment of the requirements of the CPSU Charter on the development of criticism and self-criticism as a tested method of improving life in Soviet society.

It was proposed that managers of main administrations, administrations and departments of the ministry rely more broadly on party organizations in work with the critical observations and proposals expressed in the press.

For delaying the adoption of resolutions on published materials in the pages of the newspaper VODNIY TRANSPORT and the journal RECHNOY TRANSPORT and not informing the editorial staff in a timely manner, measures of party influence were adopted toward the chiefs of the Main Inspectorate of Navigational Safety, the Workers' Supply Main Administration, the Main Administration of Foreign Shipping and Glavflot [Main Administration of Transportation and Operation of the Fleet and Ports] communists V. Lashevich, N. Artemyev, Ye. Zavitayev and P. Pyankin.

It is planned to hear Deputy Minister and Communist N. Smirnov at the party committee session in the second half of this year on his organizational work in raising the effectiveness of the departmental press and the fulfillment of the partkom decree on this issue.

Profsoyuz Officials Reprimanded

Moscow VODNIY TRANSPORT in Russian 4 Mar 86 p 3

[Unattributed article: "At the Presidium of the Trade-Union Central Committee of Maritime and River Fleet Workers"; first paragraph is VODNIY TRANSPORT introduction]

[Text] On measures for fulfilling the CPSU Central Committee decree on instances of gross administrativeness and suppression of criticism with regard to the newspapers VOZDUSHNYY TRANSPORT and VODNYI TRANSPORT.

The CPSU Central Committee, in a decree on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYY TRANSPORT and VODNYI TRANSPORT, noted that after the April (1985) Plenum of the CPSU Central Committee, a number of important economic and social problems were raised in the pages of the newspaper VODNYI TRANSPORT. The newspaper waged a struggle for reinforcing discipline and order, raising the activity and preparedness of trade-union organizations in production affairs and the education of workers and for the utilization of the achievements of scientific and technical progress, and has published a series of keen and analytical material. The CPSU Central Committee indicated in the adopted decree that an exacting and principled approach to illuminating topical issues in accelerating social and economic development in the industry along with proven criticism, without respect to persons, of specific culprits in shortcomings elevated the social reputation of the newspaper and generated an interested reader response.

There are, however, serious shortcomings in the work of the publisher along with the editorial staff. The USSR Ministry of the Maritime Fleet, the RSFSR Ministry of the River Fleet and the Trade-Union Central Committee of Maritime and River Fleet Workers did not, in a number of cases, react in the proper manner to justified criticism of their operations, which does not correspond to the policy of the April (1985) Plenum of the CPSU Central Committee.

Instead of support for the well-founded critical features of the newspaper VODNYI TRANSPORT on the part of the trade-union central committee and its departments, they undertook to defend themselves from the justified criticism of shortcomings in operations and to subordinate the activity of the newspaper to narrow departmental interests, employing illegal measures with regard to the newspaper employees.

In violation of established procedure for the review of publications, trade-union central committee Secretary Yu. M. Kartsev and trade-union central committee department managers V. I. Gusev and S. P. Korotnikov reacted in an incorrect fashion to the critical article "What about a Complete Sentence?" published in the newspaper VODNYI TRANSPORT of 18 Dec 84. A letter was prepared and sent to the editor-in-chief of the newspaper over the signature of Yu. M. Kartsev in which it was indicated that this article was published without the agreement of the organizational-instructional and mass-cultural departments and demanded punishment for the editorial staff employees.

In a review of the fourth-quarter 1984 results of newspaper operations, this erroneous position even served to cause the loss of bonus for the management employees of the editorial staff. Petty surveillance and administrativeness with regard to the management employees of the editorial staff was also tolerated in the first and second quarters of 1985.

The presidium of the trade-union central committee had no timely effect on the development of the correct attitude of the apparatus employees and trade-union

committees toward raising the activity of the press, the rendering of constant assistance to journalistic personnel and the creation of standard working and living conditions for them.

A review of the critical articles "Aside from Socialist Tasks" and "Slanderers and Their Patrons," published in the newspaper VODNYY TRANSPORT, at the trade-union central committee session showed that some responsible officials of the trade-union central committee, republic, basin and rayon trade-union committees and the trade-union committees of enterprises and organizations have still not accomplished the radical restructuring in accordance with the requirements of the April (1985) Plenum of the CPSU Central Committee and have not learned to draw the correct conclusions in principle from the critical features of the press.

The presidium of the trade-union central committee, in a resolution of 3 Feb 86, reprimanded trade-union central committee Secretary Yu. M. Kartsev and department managers V. I. Gusev and S. P. Korotkov for serious shortcomings permitted in work with the editorial collective of the newspaper VODNYY TRANSPORT, instances of gross administrativeness and suppression of criticism and untimely reaction to the critical features of the newspaper.

The earlier erroneous resolutions on disallowing bonuses to the management employees of the newspaper were rescinded.

The presidium of the trade-union central committee decreed:

- to adopt for steadfast guidance and execution the decree of the CPSU Central Committee on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYY TRANSPORT and VODNYY TRANSPORT as a specific program for raising the effectiveness of the published materials in the newspaper VODNYY TRANSPORT and for eliminating the shortcomings noted in that decree.

To regard as a most important task the utmost cooperation of every trade-union employee and every management worker with the raising of the effectiveness of published materials by the open and just discussion of industry problems in labor collectives, the strengthening of exactingness, the all-round introduction of order and an uncompromising struggle with any efforts to suppress or ignore criticism;

- that all employees of the trade-union central committee apparatus, republic, basin and rayon trade-union committees and the trade-union committees of enterprises and organizations of water transportation radically restructure their work in light of the requirements of the April and October (1985) Plenums of the CPSU Central Committee and adopt decisive measures for raising personal responsibility in the review of criticism and features on problems in the press, strengthening discipline in labor collectives and making the trade-union organs more active in the resolution of the tasks decreed by the party;

- to approve a plan of practical actions of the trade-union central committee for the fulfillment of the CPSU Central Committee decree on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYY TRANSPORT and VODNYY TRANSPORT;

-with the aim of strengthening more business-like communications and contacts with the employees of the the newspaper editorial staffs, to introduce into practice at the trade-union central committee apparatus and the editorial collegium systematic speeches by responsible employees of the trade-union central committee, ministries, management executives, republic and basin fleet committees and trade-union committees on various questions of their work, the improvement of work style and methods, raising their role in the creation of necessary working, living and rest conditions for the laborers of the industry and ensuring broad publicity for the resolution of all questions touching on the interests of the working man;

-to bring forward regularly for discussion at trade-union central committee presidium sessions and joint sessions with ministry collegia, trade-union central committee departments, republic and basin trade-union committees, trade-union committees and labor-collective meetings keen and urgent questions and critical observations published in the press;

-to reply in a timely fashion to the critical features of the press, television and radio and to draw the correct practical conclusions from them in a timely manner. Also, to establish clear monitoring of the fulfillment of projected measures for the elimination of the shortcomings uncovered and to inform the press and other mass media in a timely manner about measures taken;

-that the trade-union central committee, in conjunction with the ministries, republic and basin trade-union committees, trade-union committees and management executives will render continuous practical assistance to the newspaper VODNYI TRANSPORT in conducting Open Letter Day and creative reports of the editorial staff at labor collectives of enterprises and organizations of water transportation. In conjunction with the ministries, they will implement specific measures to render practical assistance to the editorial staff of the newspaper in the creation of standard working, living and rest conditions for the employees of the newspaper;

-that the republic, basin and rayon trade-union committees and the trade-union committees of enterprises and organizations of water transportation will discuss at their sessions the CPSU Central Committee decree on instances of gross administrativeness and suppression of criticism with regard to the editorial staffs of the newspapers VOZDUSHNYI TRANSPORT and VODNYI TRANSPORT and will plan specific measures for its fulfillment. Practical assistance and the utmost cooperation in work will be rendered to the journalist personnel of the newspaper VODNYI TRANSPORT and basin newspapers.

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MARITIME AND RIVER FLEETS

CHIEF ON RIVER TRANSPORT WORK IN KAZAKHSTAN

Moscow RECHNOY TRANSPORT in Russian No 11, Nov 85 pp 4-5

[Article by G. Bagurin, chief of the Main Administration of the River Fleet of the Kazakh SSR Council of Ministers: "On the Waterways of Kazakhstan"]

[Excerpts] Modern Kazakhstan is a prominent region of hard coal mining and of machine building, petroleum refining, and chemical industries. Since the development of virgin and long-fallow land it has become one of the basic grain-producing regions of the country.

The blue waterways, which play an important role in the development of Kazakhstan's economy, run for thousands of kilometers.

Millions of tons of national economic cargo are delivered by river transport via Irtysh, Ural, Ili, and Ishim Rivers, Balkhash Lake, and the Bukhtarminskoye and Kapchagayskoye reservoirs. Vessels and barges move with petroleum products, timber, coal, grain, mixed feed, and other cargo. Shipments of lumber from Western Siberia for enterprises of the republic increase year after year.

The technical base of river transport is growing and strengthening, the transport fleet is being replaced and replenished, port facilities are being developed, and industrial enterprises are being modernized.

All of this constantly increases the possibilities with regard to providing river transportation to the republic's national economy. The volumes of cargo and passenger transportation and transshipment work are growing.

The requirements of the Glavrechflot's transport enterprises in self-propelled as well as non-self-propelled fleet are being satisfied in the main through shipbuilding at industrial enterprises of the republic's river transport. Tugboats and self-propelled and non-self-propelled cargo ships are launched annually from the building slips of the Pavlodar, Ural, and Pervomayskiy Yards.

In their daily work the rivermen of Kazakhstan have been devoting particular attention to shipping cargo for agriculture and to prompt delivery of agricultural production presented for shipment, the volumes of which have been constantly increasing. The shipment of grain and delivery of petroleum products and other cargo for riparian areas are in the main carried out by river transport. Characteristic in this respect is the work of the East Kazakhstan

Shipping Company, which serves riparian areas of the oblast, where river transport is primary owing to the absence of a developed network of railroads and motor vehicle roads.

One of the most important tasks of rivermen of the republic is haulage of timber cargo from northern regions of Western Siberia.

More than 600,000 tons of timber is delivered to Kazakhstan annually by water transport. The transshipment ports in Pavlodar and Semipalatinsk dispatch this timber by railroad to miners of Karaganda and Temir-Tau, virgin land workers of Kustanay and Tselinograd, and builders of the republic. In the process, the rivermen deliver reinforced concrete products, mineral and construction materials, equipment, and other cargo in ships for petroleum and gas extraction regions of Western Siberia, which makes it possible to load the fleet on its return voyage.

For the purpose of freeing rolling stock and motor vehicle transport during a navigation season period, constant work is being conducted with regard to shifting cargo to river transport. Thus, switched to delivery aboard ships in the past several years were additional volumes of coal, timber, mineral, construction, and other cargo in the basins of the Bukhtarminskoye reservoir and Ili River.

To reduce shipping distance and eliminate excessive transfers from maritime to railway transport, rivermen of the republic are organizing the Bautino-Guryev route to the Caspian Sea for transporting shell blocks [rakushebloki]. The Ural'skiy Ship Repair and Shipbuilding Yard imeni Chapayev has begun building project 1736 seagoing barges of 500 ton carrying capacity. The first seagoing tug with such a barge is beginning its work. It is planned to build two seagoing barges annually, which will make it possible to constantly increase the volumes of cargo shipments via the Caspian Sea from Bautino to Guryev.

River ports of the republic are being equipped with modern portal and floating cranes and means of small-scale mechanization, which has made it possible to annually reduce the processing time of ships, railcars, and motor vehicle transport. The level of comprehensive mechanization of transshipping work exceeds 98 percent.

Shallowness in the past several years has caused extremely unfavorable hydrological conditions for river fleet operations on rivers in the republic. Therefore, carrying out necessary dredging and contraction work is of great significance. Collectives of waterway facilities have been conducting constant work with regard to maintaining guaranteed depths and thereby have established safe navigation conditions and contributed to increasing the loading of ships.

During the past several years, the traffic volume of cargo and passenger ships through the Bukhtarminskiy lock has considerably increased and its traffic capacity has been almost completely exhausted. With the aim of reducing the demurrage of ships while waiting for lockage, a decision was adopted to exclude the letting through of passenger ships through the lock. An asphalted motor vehicle road between the upper and lower reaches was built for this purpose and passengers are transported according to the new scheme. Passengers arriving

by ship from Ust-Kamenogorsk to the Bukhtarminskiy lock are transported by bus from the lower reach to the upper reach where they move to a river motorship and continue travel to their destination. Transportation of passengers who are traveling in the opposite direction is carried out similarly. All elements of this process are coordinated, thereby speeding up passenger transportation and increasing the lock's capacity for cargo ships.

Great attention is being devoted to modernization of industrial enterprises of the republic's river transport, which repair and build cargo and towing vessels and non-self-propelled and auxiliary vessels. In the overall volume of output of industrial enterprises the share of shipbuilding exceeds 50 percent.

Project 31721K shallow-draft wheel towing vessels with a capacity of 440 kW, construction of which began in 1972, have proven themselves in work under shallow water conditions. At present, 36 such vessels have been built and are being used.

In fulfilling the decisions of the October (1984) plenum of the CPSU Central Committee on the long-term land improvement program and on raising efficiency in utilization of improved land for the purpose of stable increase of the country's food fund, the Semipalatinsk Ship Repair and Shipbuilding Yard began building project 3408 Rosa-type floating pumping stations this year. The first station will begin pumping water to the fields at the start of the 1986 navigation season.

By making use of the experience of Leningrad transport workers, rivermen of the republic are working in close contact with their fellow transport workers--railway and motor transport workers. This has made it possible to improve the use of all means of transport and to reduce the demurrage of ships, railcars, and motor vehicles.

Start-to-finish shifts of rivermen, railway workers, and motor transport workers and unified continuous plans-schedules of transshipping center operations have rallied collectives toward achieving high production results of cooperation.

Rivermen of Kazakhstan have successfully coped with fulfillment of production tasks and socialist pledges for 1984 and with plans for cargo and passenger transportation and transshipment and waterway work. Industrial enterprises have fulfilled plans for the output of commodity, normative net, and marketable production, shipbuilding, ship repair, and output of consumer goods. The plan for labor productivity has been overfulfilled in transportation, transshipment and waterway work, and in industry. The cost of shipments has been reduced and the yield on capital has been increased in the basic activity and in industry.

In starting the concluding year of the 11th 5-Year Plan, rivermen of the republic have prepared the transport fleet in good time and despite difficult hydrological conditions and late opening of rivers after breaking up of ice have conducted the navigation season in an organized manner.

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PORTS AND TRANSSHIPMENT CENTERS

BRIEFS

ILICHEVSK FISHING PORT CONSTRUCTION--Ilichevsk, Odessa Oblast--The construction in Ilichevsk of the first phase of the largest fishing port on the Black Sea is finished. The latest installation to be put into operation is a block of shops for the preventative maintenance and repair of ships and a facility for small-scale mechanization. The port was constructed by the collective of the Chernomorgidrostroy [Black Sea Hydraulic Construction] trust of the Mintransstroy [Ministry of Transport Construction]. It has become a large capacity transport and freight handling terminal for the maintenance of the commercial fishing fleet on the Black Sea. The single complex houses a cold storage warehouse with the capacity to hold more than 6000 tons of fish from the coolers of ocean-going boats, an integrated processing works highly mechanized warehouses, and a locomotive fleet. [Text] [Moscow STROITELNAYA GAZETA in Russian 10 Jan 86 p 3] 12976

KRASNOVODSK OIL-LOADING IMPROVEMENTS--Krasnovodsk--An oil-loading facility which was put into operation in Krasnovodsk has made an increase possible in the traffic throughput capacity of the Krasnovodsk seaport. The renovation of the berth was ten times cheaper than the construction of a new pier. The increase in the output of the Krasnovodsk oil refining plant and the necessity to ship products across the sea to other republics gave rise to the renovation. The port can now moor a ship with a 5000 ton displacement volume. After the complete renovation of the cargo loading area during the 12th Five-Year Plan, the throughput capacity of the port will increase threefold. [Text] [Baku BAKINSKIY RABOCHIY in Russian 15 Jan 86 p 1] 12976

VOSTOCHNYY CONTAINER BERTH OPERATIONAL--Nakhodka, Primorskiy Kray--Solid concrete covers one more bank of the deep-sea Wrangel Bay. Builders of the Dalmorgidrostroy [Far East Hydraulic Construction] trust of the Mintransstroy [Ministry of Transport Construction] have put a giant berth into operation with a capacity for 75,000 international standard containers per year. By 1990, there are plans to make another berth operational here for handling containers. There are also plans for a grain facility, the second phase of a coal facility, and a berth for processing potash fertilizer. [Text] [Moscow STROITELNAYA GAZETA in Russian 10 Jan 86 p 1] A new giant berth is operational in Vostochnyy, one of the major Soviet commercial seaports. This water engineering construction project has the capacity to handle 75,000 containers per year. The creation of a facility for simultaneous loading and unloading is being carried out without a shutdown of basic work. There are

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five heavy-duty cranes in place here already; two ramps have been erected at the level of the railroad cars and the loading of rolling stock is fully mechanized. The productivity of sailors, dockworkers and railway workers has nearly doubled. [By O. Sergeyev] [Text] [Moscow GUDOK in Russian 22 Jan 86 p 1] 12976

LENINGRAD PORT ADMINISTRATIVE CHANGES--The Leningrad commercial seaport has started to work under a new, non-regional [bezrayonny] administrative structure. During the 11th Five-Year Plan, the Neva harbor handled 1.4 times more cargo than during the 10th Five-Year Plan; 4.8 million tons of cargo over-and-above the level of the five-year plan were handled. But this is no limit. For example, the goal of the plan for the current year envisions that the port will be the first in history to handle more than 15 million tons of cargo. At the port now, there are eight production and transshipment complexes instead of the four cargo regions [rayony] which existed earlier. All auxiliary operations, including the routine maintenance and repair of machinery, dockworker and mechanic service, the maintenance of cleanliness and order in the port area, and others are being transferred to specialized units. The idea behind the transition of the port to a non-regional administrative structure is to organize more precisely all operations, to increase the productivity of mechanics and dockworkers and to further intensify their productivity. [By V. Yeliseyev] [Text] [Leningrad LENINGRADSKAYA PRAVDA in Russian 23 Jan 86 p 4] 12976

YUZHNY ORE, COAL FACILITY--Odessa--The second stage of the largest specialized facility for coal and ore shipment on the Black Sea has been put into operation at the port of Yuzhnyy. The capacity of this facility is more than 2.5 million tons of bulk cargo per year. Now other ports on the Black Sea Shipping Company can pay more attention to handling lighters, container carriers and other specialized ships. [By A VODNYY TRANSPORT staff correspondent] [Text] [Moscow VODNYY TRANSPORT in Russian 28 Jan 86 p 1] 12976

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INTERSECTOR NETWORK DEVELOPMENT

OBKOM 1ST SECRETARY ON TYUMEN OBLAST RIVER TRANSPORT

Moscow VODNYY TRANSPORT in Russian 25 Jan 86 pp 1-2

[Article by Tyumen Obkom First Secretary G. Bogomyakov under the "From Congress to Congress" rubric: "A Meridian of Discoveries and Problems"]

[Text] Tyumen, the oldest city of Siberia, is now making preparations for its 400th anniversary. The Tyumen meridian, which extends more than 2,000 km to the ends of the earth--Yamal--and is well known to the world, originates here. Today, discoveries by geologists, who are advancing further to the north, the transpolar area, are continuing. Main railroad lines, new cities, and revitalized ancient settlements appear after them on the meridian of treasures like industrial oases in the middle of taiga, swamps, and tundra.

The Tyumen meridian by the will of the party and through efforts of all Soviet people from congress to congress is being transformed into a powerful industrial complex.

Today, the role and responsibility of the oblast in ensuring the country with petroleum and gas have increased even more. Our oblast has become the main source of hydrocarbonic raw materials in the country. As emphasized by M. S. Gorbachev at the conference of the party and economic aktiv of Tyumen and Tomsk oblasts, the high indicators for the extraction of petroleum and particularly of gas that have been provided for in the USSR Energy Program and the Basic Directives must be ensured to a definite degree by the oil fields of Tyumen.

In outlining goals and ways of developing sectors of the fuel and power complex in the 12th 5-Year Plan, the party points out that in the petroleum industry it is, first of all, necessary to raise fuel extraction effectiveness by using efficient deposit development systems, improving technology and technical equipping of drilling work, broadly introducing modern methods for increasing oil recovery of strata, using progressive technologies and better utilization of production capital.

As for gas industry, then here the party directs us, first of all, toward accelerated drawing into development of the Yamburg and some other gas deposits and, second, toward conducting work connected with organizing gas production on the Yamal Peninsula. Third, toward broad introduction of automated complex unit installations of high unit capacity for complex treatment of gas and gas condensate.

However, frankly speaking, this does not mean at all that the question is one of petroleum and gas alone. It is a question of comprehensive solution of all aspects of rapid development. It is a question of having to devote particular attention to the necessity of "an exemplary preparation of the small 'whole,' precisely the 'whole,' that is not a single farm, not a single sector of the economy, and not a single enterprise, but the sum of all economic relations..." That is what Vladimir Il'ich Lenin taught... The sums!

This is precisely why enormous capital investments were allocated for the implementation of the program for comprehensive development of the petroleum and gas industry, which was defined by a resolution of the CPSU Central Committee and the USSR Council of Ministers, and for development of other sectors of the oblast's national economy.

Standing behind these capital investments are also broad utilization of electronic computer technology, new methods for exploration of mineral resources, further development of petrochemistry, and commissioning of installations for the production of motor fuel, which will make it possible to supply more than half of the requirements in this fuel by virtue of local production.

Also standing behind these capital investments are further development of electrical power engineering, commissioning of new capacities in machine building and metalworking, increase of timber hauling, solution of the Food Program, realization of the Comprehensive Program for Development of Consumer Goods Production and the Sphere of Services, which was confirmed by the CPSU Central Committee and the government, and radical measures for considerable improvement of the population's living conditions and construction of schools, preschool institutions, hospitals, and polyclinics.

The specific conditions of our oblast put solution of transportation problems to the forefront. I do not exaggerate when I say that the success in increasing petroleum extraction and recovery of large capital investments in these and all other aforementioned purposes will to a considerable degree depend on transportation, including water transportation.

The water arteries of Tyumen Oblast, I am not saying this only for an effect or graphic comparison, are like blood vessels of a living organism. There are hundreds, thousands of them. I would like to stress in particular that even the smallest ones of them are just as vitally important as major main routes. The length of navigable main river routes in the oblast exceeds 20,000 km.

A particular feature in the development of the petroleum and gas industry in Tyumen Oblast this year and during the entire 12th 5-Year Plan will be the discovery and putting into operation of new deposits in remote and hard to reach regions. All of them are permeated through by small rivers as if by capillaries. For example, the Filippovskoye, Lovinskoye, and Novolovinskoye deposits by the Mulymya River basin, the Khokhryakovskoye and Permyakovskoye deposits by the Vakh River basin, the Novomolodezhnoye deposit by the Kolik-Egan River basin, and the Orekhovo-Yermakovskoye deposit by the Kul-Egan River basin. And so are all of the 18 deposits. In the future, dozens, hundreds more deposits will require shipment of cargo precisely via small rivers. According to an estimate

by the Ob-Irtysh United Shipping Company, cargo shipments via small rivers by the end of the 12th 5-Year Plan will reach almost 14 million tons and will increase by 25 percent compared with last year. But even this is not enough.

To fulfill the tasks outlined by the party and the government with regard to development of petroleum and gas extraction or more precisely to fully satisfy the requirements of the complex in material and technical resources a much greater increase is needed in the volume of cargo deliveries by water transportation via small rivers.

Are organizations of the river fleet prepared for this? If one is to speak frankly based on precise objective calculations, they are not. Here are the facts.

According to the data from the list of inland waterways that are used by the MRF, there are 56 rivers and channels in the basin of our shipping company which are considered to be in the category of small rivers. Their overall length totals almost 10,000 km.

This list is hopelessly outdated, it was published in 1976 and does not reflect at all the actual number and condition of small rivers in Western Siberia which must work in order to develop shipment of cargo for enterprises.

At present, the shipping company is transporting cargo via 24 small rivers. Their overall length is approximately 6,000 km of which a little over half have guaranteed depths. The length of the operational period on them ranges from 30 to 186 days. These facts are for last year's navigation season.

Can such an approach fully satisfy the requirements of the economy in material and technical resources? Of course, not.

It is necessary to carry out priority tasks with regard to the small rivers that are being used and those that are subject to transport development during the upcoming navigation season. It is necessary to increase the length of waterways with a navigable situation and guaranteed depths that are being elucidated and to clean the channels of rivers and approaches to berths. It is necessary to conduct essential route surveys and to open shipping on new rivers. It is necessary to prepare conclusions on the possibility of transport development of small lateral rivers and their sectors, which are drawn to petroleum and gas deposits. And finally, it is necessary to draw up a pilot report and fairway charts of sectors of the small rivers which are being used and those which are subject to transport development.

You see, how much is necessary. These "necessities" are known by any more or less educated river transport specialist. The essence is in something else. How to realize them and what realistic periods are required for this? Realistic, means contributing to fulfillment of plans of the 12th 5-Year Plan for the extraction of petroleum and gas, beginning from this year.

Would the situation be saved by a decision of the MRF Collegium such as this: "Comrades Lyufta, Filatov, Strel'chenko, and Pleskevich are to present to Comrades Gor'kiy and Sirotin a program for the development of shipments via small rivers for the long-term within the boundaries of shipping companies. Period--20 days"?

Without a doubt, it would not be saved. The period is unrealistic. Of course, if it is a question about a piece of paper, then it can be drawn up. As a matter of fact, it has already been prepared by the shipping company. The program is detailed and sound. I will not dwell on it in detail, it is known to the ministry.

It would also not be saved by the order of the minister, which made it incumbent upon some organizations to work out a program in the fourth quarter of 1985 for transport development of small rivers of Western Siberia. The working out of such a program by the TsNIIIEVT, the Sibgiprorchtrans, the NIIVT, the PEU and the Ob-Irtysh United and the West Siberian River Shipping Companies with participation of the Minnefteprom and the Mingazprom is being dragged out to the 13th 5-Year Plan. Of course, such working out must be conducted to be at least prepared for the next 5-year plan.

Belated orders and decisions only indicate that the problems with regard to development of small rivers were not thought through earlier in their entirety. At present, a way out for the 12th 5-Year Plan must be sought in immediate implementation of the broad program for mastering shipments via small rivers in 1986. Its draft has been prepared.

Here, naturally, things cannot be done without the USSR Gosplan solving the question with regard to construction in the Ob-Irtysh basin of a plant for the output of non-self-propelled river vessels and pusher tugs. There is also no way out without solving the question with regard to additional allocation to the Ob-Irtysh United Shipping Company of small-tonnage shallow-draft fleet.

But all of this, so to speak, is from the field of prospects. The tactics for the navigation seasons of 1986-87 and the entire 12th 5-Year Plan, however, require that rivermen redistribute small-tonnage shallow-draft vessels from other basins to Tyumen Oblast.

The shipping company now requires as a minimum 65-70 shallow-draft vessels and 100-120 barges with a draft up to 1 m. After all, only 20, 40, and 100-ton barges can enter rivers such as Pim, Yugan, Balyk, Vakh, and many other rivers which surround new regions of drilling and construction.

Today, waterway workers also do not have a fleet on which they could begin preparing these rivers and channels for the navigation season. One cannot leave on a voyage without preliminary work by waterway workers.

That is why, apparently, the rate of organization of shipping lanes of small rivers on main directions and particularly in transpolar basins is lagging behind the rate of growth in the volume of shipments. There is also another reason here. The Irtysh Basin Administration of Waterways has not drawn up until now a plan coordinated with the shipping company for improving shipping conditions in the basin.

Of course, this is far from the whole list of problems which require urgent solution.

The radio communications system which exists here to this day has become the talk of the town in the shipping company. It is the main obstacle in improvement of the transportation process in Tyumen Oblast. Can a fleet which is supplied with radio equipment that is both obsolete and worn-out have at least satisfactory communications? The shipping company's communications with northern ports of the basin--Urengoy, Nadym, Tazovskiy, Salekhard, and Yamburg--is below any satisfactory level.

The way out is not only in replacement of radio equipment, but mainly in construction of the Tyumen-Tobolsk and Tobolsk-Demyanskoye cable trunks and radio relay lines from Demyanskoye to Labytnangi, Nadym, Yamburg, Urengoy, and Tazovskiy.

It is also necessary to improve planning of cargo shipments for more stable work in fulfilling plans for shipment and delivery of cargo for enterprises of the complex.

During the 12th 5-Year Plan and the subsequent period, large-scale development of mineral deposits of Yamal and then of the Gydanskiy Peninsula is planned. The extent of the shipping company's participation in this development has also not been defined here. There are no careful studies of any kind in this respect in the ministry, planning institutes, and the shipping company. This is despite the fact that the opening of a railroad to Yamburg as early as 1987 will change cargo flows to the transpolar region both in volume and structure.

Up to the present time, the questions of utilization of the mechanized berths, which are under construction in Nizhnevartovsk, Nadym, and Urengoy, during the 12th 5-Year Plan and to the year 2000 remain unclear in the shipping company. Meanwhile, the commissioning of production capacities in these ports takes place against a background of annually decreasing volumes of cargo shipments through them. The Sibgipromtrans so far does not have corresponding studies with regard to the workload of the ports which are under construction.

It is necessary to examine all of these questions without delay. Precisely without delay. This is the demand of the day. The resolution of the CPSU Central Committee and the USSR Council of Ministers on comprehensive development of the petroleum and gas industry of Western Siberia opens a qualitatively new stage in development of the Tyumen Fuel and Power Complex. It, as is known, is a component part of the draft of Basic Directions for Economic and Social Development of the Country, which is based on a sharp turn toward intensification and vigorous advance of scientific and technical progress.

We, unfortunately, are still far from this vigorous advance, from a comprehensive solution of problems. After all, so far not a single scientific research institute, not a single main administration, not a single ministry of cargo owners, and not the USSR Gosplan with its Complex Transportation Problems Institute have provided answers to very important questions. Where, to what river will the fleet go tomorrow, in 1 year, in 5 years, and all the more so in the year 2000? What will be the dynamics of cargo flows in the near future on the rivers which have already been mastered? Will it be necessary to master additional sectors of these rivers and what volumes are to be shipped via them? What new rivers are to be mastered additionally, within what periods, and for what volumes?

Without a comprehensive and timely, careful study of these questions and without efficient long-range planning of shipments, it is impossible to talk seriously about a further growth in the volumes of cargo deliveries.

A new, a much higher level in providing for living requirements of the population must correspond to the new stage in the development of the oblast. "The attitude toward people and concern for them is the main question of our policy," Mikhail Sergeyevich Gorbachev stated at the conference of the party and economic aktiv in Tyumen. "For new regions of development it is of particular significance."

Rivermen of the Ob-Irtysh United Shipping Company so far remain in the position of stepchildren in this respect. I will begin with the fact that the shipping company does not have proper conditions for work with a computer center and a communications center which it needs.

Plans for construction of river fleet enterprises have no provisions for socio-cultural projects and housing.

Evidently, the shipping company must organize its own construction administration or a trust in Tyumen, which together with contractual organizations would speed up organization of rivermen's enterprises.

The oblast party committee for its part will do everything possible to assist rivermen in accelerating construction of preschool institutions, clubs, and sport bases.

Without such cooperation, the shipping company will remain understaffed in the future, even to a greater extent than it is now.

There is another side of the coin in understaffing (during the past 5 years, there has been a constant shortage of more than 1,500 people)--the training of specialists. To be sure, during the past 3 years, that is since the founding of the shipping company, training of personnel has increased in the oblast. But this is not enough. That is why construction of a vocational and technical school for 720 students is underway in Tobolsk, and it is planned to build a similar school for 400 students in Surgut. To provide the shipping company with command personnel and ports and industry with medium-level specialists, the question about construction and opening of a river school in Tyumen has now become urgent. In the long term it is also necessary to think about opening in Tyumen of an affiliate of the Institute of Water Transport Engineers.

And finally. If it is a question of comprehensive solution of problems which are linked with the development of our region's riches, then it is impossible to say nothing about such a serious and urgent question as transshipment of cargo in transpolar regions.

During the March-April period, seamen deliver thousands of tons of cargo to Kharasavey, which are needed for normal provision of geological exploration work. The shipment of every ton costs approximately R800. Rivermen are not working in the direction of Yamal during the navigation season owing to a simple reason that they do not have a river-sea type fleet. It is desperately needed. The cost of shipping cargo will be sharply reduced if the shipping company gets such a fleet.

It is also necessary to look from the same positions on the shipment of large diameter pipes from Baltic ports to Nadym

The transshipment of pipes is conducted at an open roadstead in Gulf of Ob. This makes the fleet absolutely dependent on the weather and the waves. As a result, 25 percent of the scarce time out of a 90-day navigation period is wasted by the fleet while waiting for weather. We can take on 400,000 tons in the remaining time.

In order to increase the capacity, it is necessary to construct a protected water area. To do this it is necessary for the Ministries of the Maritime and River Fleets to reach an agreement on construction of such a water area. After all, both ministries are suffering, and in the final analysis the state loses millions of rubles.

Besides, it will be necessary to transship not only pipes but also other cargo which is needed by Yamal and the entire transpolar area of Tyumen Oblast.

As we can see there are many problems connected with operations of the water transport and with its contribution to the development of oil and gas fields of Western Siberia. Not a single one of them must left unsolved. After all, each one of them is a composite part of the grandiose plan of the new 5-year plan in which a determining role in providing the country with petroleum and gas is allotted to Tyumen Oblast. Each one of them is that composite part of "the sum of all economic relations" which, as Vladimir Il'ich Lenin taught, must be solved in a complex, in unity, and definitely in an exemplary manner.

It is precisely in this manner that these questions were raised by communists at the recently held 20th oblast accountability and election party conference. There is no doubt that on their part together with all workers of the oblast they will make a fitting contribution to implementation of the Leninist party's great plans.

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